REM- 3A65

SEARCH REQUEST FORM

Access DB# 132180

Scientific and Technical Information Center

Requester's Full Name: K. Weddington Examiner #: 68082 Date: 9-9-04 ✓
Art Unit: 1614 Phone Number 30 272-0587 Serial Number: 10/676,770
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need. MEJ
****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

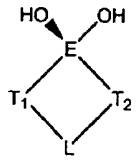
Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the*

1. A method of controlling bacterial growth, comprising exposing a bacterium to a compound of structure I



I

wherein E is selected from the group consisting of B, P, and S, T_1 and T_2 are each independently selected from the group consisting of O, NR, and CH_2, where R = H or C_1-C_8 alkyl, or C_1-C_8 oxoalkyl, and L is selected from the group consisting of ethylene, propylene, and four to six-membered alicyclic and aromatic rings, provided that structure I does not include Al-2-borate.

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: Noble	NA Sequence (#) _____	STN 1201
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) 1	Questel/Orbit: _____
Date Searcher Picked Up: 9/19/04	Bibliographic _____	Dr.Link _____
Date Completed 9/15/04	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time 30 75	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: 90 150	Other _____	Other (specify) _____

PTO-1590 (1-2000)

STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 132180

TO: Kevin Weddington **Location: rem/3a65/3c70** **Art Unit: 1614** **Wednesday, September 15, 2004** **Case Serial Number: 10/676770**	**From: Noble Jarrell** **Location: Biotech-Chem Library** **Rem 1B71** **Phone: 272-2556** **Noble.jarrell@uspto.gov**

Search Notes

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=> b reg
FILE 'REGISTRY' ENTERED AT 12:41:02 ON 15 SEP 2004
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STRUCTURE FILE UPDATES:   14 SEP 2004  HIGHEST RN 744786-72-9
DICTIONARY FILE UPDATES:  14 SEP 2004  HIGHEST RN 744786-72-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que stat l10
L1                  STR

5 O     O 6          N--G4        O--Ak
  \    /    2       @7   8       @9 @10
   1 G1=G2
     /   \
     \   /
     G2=G3
   4       3


VAR G1=B/P/S
VAR G2=CH2/O/NH/7
REP G3=(2-3) C
VAR G4=AK/9/10
NODE ATTRIBUTES:
CONNECT IS E1  RC AT   5
CONNECT IS E1  RC AT   6
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  10

STEREO ATTRIBUTES: NONE
L6        667950 SEA FILE=REGISTRY ABB=ON  PLU=ON  (SC4 OR SC5 OR NSC3 OR NSC4
                 OR NSNC2 OR NSNC3 OR OSNC2 OR OSNC3 OR OSC3 OR OSC4 OR PC5 OR
                 PC4 OR NPC3 OR NPC4 OR NPNC2 OR NPNC3 OR NPOC2 OR NPOC3 OR
                 OPC3 OR OPC4 OR BC4 OR BC5 OR BNC3 OR BNC4 OR BOC4 OR BOC3 OR
                 BNC2N OR BNC3N OR BNC2O)/ESS AND O>=2
L7         38975 SEA FILE=REGISTRY ABB=ON  PLU=ON  (OSOC2 OR OSOC3 OR OPOC2 OR
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L8        705669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L6 OR L7)
L10        27875 SEA FILE=REGISTRY SUB=L8 SSS FUL L1

100.0% PROCESSED 215828 ITERATIONS                      27875 ANSWERS
SEARCH TIME: 00.00.03


=> d his

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L3                 SCR 1838 AND 2005
L4                 SCR 2039 OR 2050 OR 2049 OR 2053 OR 2052 OR 2043 OR 2054
L5             13 L1 AND L3 NOT L4
L6        667950 (SC4 OR SC5 OR NSC3 OR NSC4 OR NSNC2 OR NSNC3 OR OSNC2 OR OSNC3
L7         38975 (OSOC2 OR OSOC3 OR OPOC2 OR OPOC3 OR BOC2O OR BOC3O)/ESS AND O>
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L9            50 L1  SUB=L8 SAM
L10        27875 L1 FULL SUB=L8
                 SAVE TEMP L10 WED770F/A

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L11        86588 L10
                 E COOPER S/AU
L12          152 E3,E20-21
                 E COOPER STEPHEN/AU
L13          157 E3,E18-21
                 E YAGER K/AU
L14           22 E3,E11-13
L15            9 QUOREX/CS,PA

     FILE 'HCAOLD' ENTERED AT 11:57:00 ON 15 SEP 2004
L16          910 L10
                 SEL AN
                 EDIT E1-E910 /AN /OREF

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L17         1652 E1-910
L18        87477 L11 OR L17
L19            3 L18 AND L12-15
L20        87474 L18 NOT L19
L21        80733 L20 AND (PY<=2001 OR PRY<=2001 OR AY<=2001 OR PRD<20010824 OR A
                 E BACTERIA/CT
L22       207840 (BACTERI? OR EUBACTERI?)/CW
L23          274 L22 AND L21
L24          129 L23 AND P/DT
L25           71 L24 AND US/PC
L26           31 L24 AND US/PC.B

=> b hcap
FILE 'HCAPLUS' ENTERED AT 12:41:21 ON 15 SEP 2004
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FILE COVERS 1907 - 15 Sep 2004  VOL 141 ISS 12
FILE LAST UPDATED: 14 Sep 2004  (20040914/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d all fhitstr hitrn l19 tot

L19  ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:173456  HCAPLUS
DN   138:217167
ED   Entered STN:  07 Mar 2003
TI   Crystal structure of Vibrio harveyi quorum sensing regulat
     with autoinducer-2 and its use of rational drug design
IN   Bassler, Bonnie L.; Schauder, Stephan; Chen, Xin; Hughson,
     Cooper, Stephen R.
PA   Quorex Pharmaceuticals, Inc., USA; Princeton University
SO   PCT Int. Appl., 74 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  A61K038-16
CC   6-3 (General Biochemistry)
     Section cross-reference(s): 1, 75
FAN.CNT 1
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l19: Applicant

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003018046	A1	20030306	WO 2002-US26579	20020822
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003175930	A1	20030918	US 2002-227400	20020822
PRAI	US 2001-314705P	P	20010824		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003018046	ICM	A61K038-16

AB A crystal comprising Vibrio harveyi protein LuxP is obtained, and a binding site for autoinducer-2 (AI-2) identified. X-ray crystallog. data for LuxP and a LuxP-AI-2 complex is determined and refined to 1.5 .ANG. resolution and used in a drug discovery method. Pharmaceutical compns. comprising ligands identified by such drug discovery methods are used to treat bacterial infections.

ST LuxP protein crystal structure autoinducer 2; drug design LuxP protein crystal structure

IT Computer application
Conformation
Drug design
Molecular modeling
Protein sequences
Vibrio harveyi
X-ray diffraction
(crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

IT Antibacterial agents
(design of; crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

IT Proteins
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene luxP, complexes with autoinducer-2; crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

IT Crystal structure
Molecular structure, natural product
(of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

IT 500951-42-8D, complex with autoinducer-2
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

IT **406683-36-1D**, Autoinducer-2, complexes with LuxP
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

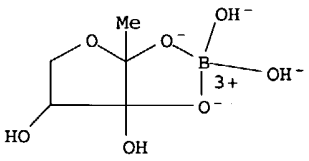
RE

(1) Bassler; Molecular Microbiology 1994, V13(2), P273 HCAPLUS
(2) Lo; Abstracts of the General Meeting of the American Society for Microbiology, 101st General Meeting of the American Society for Microbiology 2001, V101, P741

IT **406683-36-1D**, Autoinducer-2, complexes with LuxP
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

RN 406683-36-1 HCAPLUS

CN Borate(1-), [(2S,3R,4S)-dihydro-2-methyl-2,3,3,4(2H)-furantetrolato(2-)-.kappa.O2,.kappa.O3]dihydroxy-, (T-4)- (9CI) (CA INDEX NAME)



IT **406683-36-1D**, Autoinducer-2, complexes with LuxP
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crystal structure of Vibrio harveyi quorum sensing regulator LuxP complex with autoinducer-2 and its use of rational drug design)

L19 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:173445 HCAPLUS
DN 138:221708
ED Entered STN: 07 Mar 2003
TI Preparation of antibacterial agents based upon oxyanion binding
IN **Cooper, Stephen R.; Yager, Kraig M.**
PA **Quorex** Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-69
CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 1, 10, 25, 27, 28, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003018029	A1	20030306	WO 2002-US27154	20020822
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003105062	A1	20030605	US 2002-227327	20020822
	US 6737415	B2	20040518		
	EP 1418923	A1	20040519	EP 2002-759457	20020822
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	US 2004152669	A1	20040805	US 2003-676770	20031001
PRAI	US 2001-314683P	P	20010824		
	US 2002-227327	A3	20020822		
	WO 2002-US27154	W	20020822		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003018029	ICM	A61K031-69
US 2003105062	ECLA	A61K031/38; A61K031/381; A61K031/425; A61K031/66; A61K031/69

OS CASREACT 138:221708; MARPAT 138:221708
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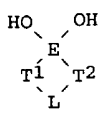

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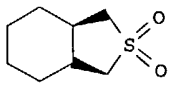


II

AB Oxyanion compds. I [E = B, P,S; T1, T2 = O, NR, CH2; R = H, C1-8-alkyl,

C1-8-oxoalkyl; L = ethyelen, propylene, C4-6-alicyclic (cyclopentyl, cyclohexyl, pyrrolidine, THF, piperidine, pyran, dioxane, morpholine), aromatic (pyrrole, furan, pyridine, pyridimidine, pyrazine, imidazole, thiazole, oxazole, purine, indazole)] are useful for treating bacterial growth. Thus, sulfone II was prepared from cis-1,2-cyclohexanedimethanol dimesylate via reaction with Na2S in DMSO followed by S-oxidation with monoperphthalic acid in Et2O. The compds. may be used to treat bacterial infections in human beings and to regulate biofilm formation (no data). Pharmaceutical compns. comprising one or more such compds. are useful for treating bacterial infections in human beings (no data).

ST antibacterial oxoanion prepn; bacterial infection human treatment oxoanion; microbial biofilm regulation oxyanion

IT Infection
(bacterial, treatment; preparation of antibacterial agents based upon oxoanion binding)

IT Carbonates, preparation
Sulfates, preparation
Sulfites
Sulfones
Urethanes
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cyclic; preparation of antibacterial agents based upon oxoanion binding)

IT Borates
Phosphates, preparation
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(esters; preparation of antibacterial agents based upon oxoanion binding)

IT Biofilms (microbial)
(formation regulator; preparation of antibacterial agents based upon oxoanion binding)

IT Oxyanions
(oxoanions; preparation of antibacterial agents based upon oxoanion binding)

IT Antibacterial agents
Human
(preparation of antibacterial agents based upon oxoanion binding)

IT Amides, preparation
Sulfates, preparation
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(sulfamates, cyclic sulfamidates and sulfamidites; preparation of antibacterial agents based upon oxoanion binding)

IT Cyclic compounds
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(sulfones; preparation of antibacterial agents based upon oxoanion binding)

IT 5329-14-6DP, Sulfamidic acid, cyclic derivs.
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cyclic; preparation of antibacterial agents based upon oxoanion binding)

IT 66347-68-0, cis-Cyclohexane-1,2-dimethanol dimethanesulfonate
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with sodium sulfide; preparation of antibacterial agents based upon oxoanion binding)

IT 54053-76-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and S-oxidation of; preparation of antibacterial agents based upon oxoanion binding)

IT 57-13-6DP, Urea, cyclic derivs. 2171-74-6P, o-Phenylene carbonate 6303-21-5DP, Phosphinic acid, cyclic esters and amides 7803-58-9DP, Sulfamide, cyclic derivs. 10043-91-1DP, Phosphorodiamidic acid, cyclic derivs. **66301-61-9P**, cis-8-Thiabicyclo[4.3.0]nonane 8,8-dioxide **500729-74-8P 500729-75-9P**
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antibacterial agents based upon oxoanion binding)

IT 120-80-9, Catechol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of antibacterial agents based upon oxoanion binding)

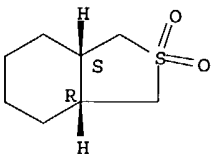
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Coddington; Journal of Coordination Chemistry 1989, V20(1), P27 HCAPLUS
(2) Dale, J; US 3053880 A 1962 HCAPLUS
(3) de Gray; US 3325262 A 1967 HCAPLUS
(4) Degray; US 3564091 A 1971 HCAPLUS

(5) Sagulenko; Viniti 1984, P4184 HCAPLUS
(6) Singer, M; US 3873279 A 1975 HCAPLUS
IT **66301-61-9P**, cis-8-Thiabicyclo[4.3.0]nonane 8,8-dioxide
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antibacterial agents based upon oxoanion binding)
RN 66301-61-9 HCAPLUS
CN Benzo[c]thiophene, octahydro-, 2,2-dioxide, (3aR,7aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT **66301-61-9P**, cis-8-Thiabicyclo[4.3.0]nonane 8,8-dioxide
500729-74-8P 500729-75-9P
RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antibacterial agents based upon oxoanion binding)

L19 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:905736 HCAPLUS
DN 137:379976
ED Entered STN: 29 Nov 2002
TI Methods using autoinducer-2 effectors for regulating bacteria
IN Surette, Michael G.; Stein, Jeffrey
PA **Quorex** Pharmaceuticals, Inc., USA; University of Technologies International, Inc.
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 1-5 (Pharmacology)
Section cross-reference(s): 10
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002094188	A2	20021128	WO 2002-US15993	20020516
	WO 2002094188	A3	20030227		
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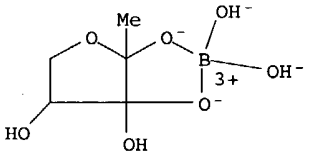
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1406654	A2	20040414	EP 2002-756096	20020516
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003022932	A1	20030130	US 2002-151189	20020517
PRAI	US 2001-292543P	P	20010521		
	WO 2002-US15993	W	20020516		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002094188	ICM	A61K

AB Bacteria lacking the ability to secrete autoinducer-2 may nonetheless be regulated by contacting the bacteria with an amount of an autoinducer-2 effector that is sufficient to regulate the bacterium. Pseudomonas aeruginosa, a bacterium that colonizes the lungs of cystic fibrosis patients with often devastating effects on health, is a preferred target for regulation.
ST autoinducer 2 effector bacterial regulation; Pseudomonas cystic fibrosis autoinducer 2 effector
IT Eubacteria

(autoinducer 2 or autoinducer 2 agonist secretion by; autoinducer-2 effectors for regulating bacteria)
IT Antibacterial agents
Apoptosis
Burkholderia
Burkholderia cepacia
Cystic fibrosis
Human
Pseudomonas
Pseudomonas aeruginosa
(autoinducer-2 effectors for regulating bacteria)
IT Infection
(bacterial; autoinducer-2 effectors for regulating bacteria)
IT Immune system
(cells; autoinducer-2 effectors for regulating bacteria)
IT Shock (circulatory collapse)
(septic; autoinducer-2 effectors for regulating bacteria)
IT Streptococcus
(.alpha.-hemolytic, CFX5; autoinducer-2 effectors for regulating bacteria)
IT **406683-36-1**, Autoinducer 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(autoinducer-2 effectors for regulating bacteria)
IT 18820-30-9 25564-22-1, 2-Pentyl-2-cyclopenten-1-one 28982-58-3D, Cyclopentenone, derivs. 85554-61-6D, Furanone, derivs.
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(autoinducer-2 effectors for regulating bacteria)
IT **406683-36-1**, Autoinducer 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(autoinducer-2 effectors for regulating bacteria)
RN 406683-36-1 HCAPLUS
CN Borate(1-), [(2S,3R,4S)-dihydro-2-methyl-2,3,3,4(2H)-furantetrolato(2-)-.kappa.O2,.kappa.O3]dihydroxy-, (T-4)- (9CI) (CA INDEX NAME)



IT **406683-36-1**, Autoinducer 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(autoinducer-2 effectors for regulating bacteria)

=> d all hitstr l26 tot

L26 ANSWER 1 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:971379 HCAPLUS
DN 140:31424
ED Entered STN: 12 Dec 2003
TI Nitric oxide in a pathogen inactivation process
IN Edrich, Richard Alan; Goodrich, Laura; Deppisch, Reinhold; Hlavinka, Dennis J.; Lockerbie, Robert Owen; Beck, Werner
PA USA
SO U.S. Pat. Appl. Publ., 61 pp., Cont.-in-part of U.S. Pat. Appl. 2003 141,260.
CODEN: USXXCO
DT **Patent**
LA English
IC ICM A01N001-02
ICS A61K031-7076; A61K031-198; A61K033-00
NCL 435002000; 424718000; 514047000; 514048000; 514562000; 514565000
CC 63-3 (Pharmaceuticals)
FAN.CNT 19

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2003228564	A1	20031211	US 2003-364661	20030210	<--
	US 2003073650	A1	20030417	US 2002-159781	20020530	<--
	US 2003141260	A1	20030731	US 2002-328717	20021223	<--
PRAI	US 2001-294866P	P	20010530	<--		

US 2001-344109P	P	20011228	<--
US 2002-355393P	P	20020208	
US 2002-373936P	P	20020419	
US 2002-159781	A2	20020530	
US 2002-328717	A2	20021223	
US 1998-119666	A2	19980721	<--
US 1999-357188	A2	19990720	<--
US 2000-586147	A2	20000602	<--
US 2002-353321P	P	20020201	
US 2002-373465P	P	20020417	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003228564	ICM	A01N001-02
	ICS	A61K031-7076; A61K031-198; A61K033-00
	NCL	435002000; 424718000; 514047000; 514048000; 514562000; 514565000
US 2003228564	ECLA	A61K041/00H6; A61K041/00W; A61L002/00P; A61L002/00P4A; A61L002/00P4; A61L002/00P2; A61L002/02; A61L002/08; A61L002/10; A61L002/16; A61M001/36R <--

AB This invention provides methods and compns. for using nitric oxide in a photoradiation pathogen inactivation process for whole blood and blood components to improve pathogen kill and to improve preservation of the quality of the blood components. This invention provides methods for using nitric oxide in combination with oxygen, photosensitizers, quencher and/or glycolysis inhibitor, and compns. comprising blood components decontaminated by these methods. Nitric oxide is provided using nitric oxide gas, or nitric oxide generators such as L-arginine, and/or N-acetylcysteine. This invention also provides compns. suitable for photoradiation pathogen inactivation that include fluid comprising a blood component, a photosensitizer, and dissolved nitric oxide. This invention provides decontamination systems useful for performing the methods of this invention and methods for making the decontamination systems. This invention also provides methods for decontaminating fluids and methods for increasing the storage life and quality of photochem. decontaminated platelets. Pathogen eradication was performed in a 3-L Sengewald bag on 300 mL plasma (90% carry-over) that was inoculated with E. coli. The bag also contained 150 mL of 500 ppm nitric oxide gas in a nitrogen balance, delivered through a sterile barrier filter, and 50 .mu.M riboflavin. UV photoradiation of 320 nm wavelength delivered 6 J/cm2 of energy, at about 30.degree.. The results of pathogen inactivation immediately after treatment were compared to other exptl. results by using 5 and 7 J/cm2 UV irradiation energy, with illumination using similar conditions of VHO light bulbs with a ballast, but with no NO and using only 278 mL fluid. With E. coli, improvement of bacterial inactivation was seen using 500 ppm NO atmospheric during illumination at 6 J/cm2, with both 5 and 7 J/cm2 and with both VHO and T8 lights.

ST nitric oxide pathogen inactivation

IT Medical goods
(bags; nitric oxide in pathogen inactivation process)

IT Proteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(blood; nitric oxide in pathogen inactivation process)

IT Glycolysis
(inhibitor; nitric oxide in pathogen inactivation process)

IT Animal virus
Bacillus cereus
Bacillus subtilis
Bacteriophage
Blood
Blood plasma
Blood products
Bovine diarrhea virus
Citrobacter freundii
Clostridium perfringens
Cytomegalovirus
Enterobacter aerogenes
Enterobacter cloacae
Enterococcus faecalis
Erythrocyte
Escherichia coli
Eubacteria
Fungi
Granulicatella adiacens
Hepatitis A virus
Hepatitis B virus

Hepatitis C virus
Human
Human T-lymphotropic virus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 4
Human immunodeficiency virus
Human immunodeficiency virus 1
Klebsiella pneumoniae
Leukocyte
Light
Parasite
Parvovirus
Pathogen
Photosensitizers (pharmaceutical)
Platelet (blood)
Propionibacter
Protozoa
Pseudomonas aeruginosa
Pseudomonas fluorescens
Pseudomonas mirabilis
Salmonella enteritidis
Serratia proteamaculans proteamaculans
Sindbis virus
Staphylococcus aureus
Staphylococcus epidermidis
Staphylococcus marcescens
Staphylococcus viridans
Storage
Streptococcus cholerasuis
Streptococcus pneumoniae
Streptococcus pyogenes
TT virus
UV radiation
Vesicular stomatitis virus
West Nile virus
Yersinia enterocolitica
(nitric oxide in pathogen inactivation process)

IT Reactive oxygen species
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(nitric oxide in pathogen inactivation process)

IT Infection
(pseudorabies; nitric oxide in pathogen inactivation process)

IT 10102-43-9, Nitric oxide, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nitric oxide in pathogen inactivation process)

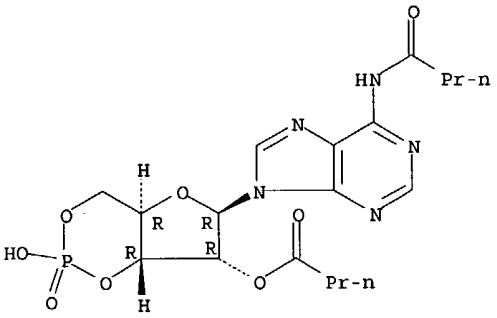
IT 55-63-0, Nitroglycerin 74-79-3, L-Arginine, biological studies 83-88-5, Riboflavin, biological studies 154-17-6, 2-Deoxy-D-glucose **362-74-3** 490-59-5D, Isoalloxazine, derivs. 616-91-1, N-Acetyl-cysteine 14402-89-2, Sodium nitroprusside **32266-35-6** 92382-74-6, DEA-NO 146672-58-4, PAPA-NO 146724-94-9, DETA-NO
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nitric oxide in pathogen inactivation process)

IT 7782-44-7, Oxygen, formation (nonpreparative)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(singlet; nitric oxide in pathogen inactivation process)

IT **362-74-3 32266-35-6**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nitric oxide in pathogen inactivation process)

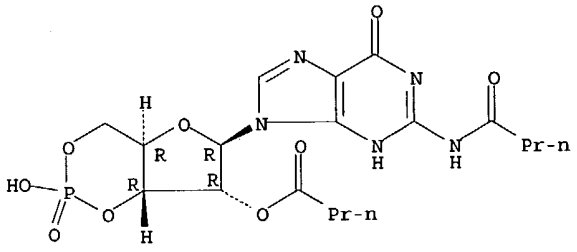
RN 362-74-3 HCAPLUS
CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 32266-35-6 HCAPLUS
CN Guanosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:512122 HCAPLUS
DN 139:80277
ED Entered STN: 04 Jul 2003
TI DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy
IN Bonini, James A.; Borowsky, Beth E.; Adham, Nika; Boyle, Noel; Thompson, Thelma O.
PA Synaptic Pharmaceutical Corporation, USA
SO U.S. Pat. Appl. Publ., 78 pp., Cont.-in-part of U.S. Ser. No. 641,259.
CODEN: USXXCO
DT **Patent**
LA English
IC ICM C07H021-04
NCL 536023500
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 13

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003125539	A1	20030703	US 2002-278455	20021022 <--
	US 6221660	B1	20010424	US 1999-387699	19990813 <--
	WO 2000050562	A2	20000831	WO 2000-US4413	20000222 <--
	WO 2000050562	A3	20001214		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6468756	B1	20021022	US 2000-641259	20000817 <--
PRAI	US 1999-255376	B2	19990222 <--		
	US 1999-387699	A1	19990813 <--		
	WO 2000-US4413	A2	20000222 <--		
	US 2000-641259	A2	20000817 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003125539	ICM	C07H021-04
	NCL	536023500
US 2003125539	ECLA	C07K014/705 <--
US 6468756	ECLA	C07K014/705 <--

AB The invention provides protein and cDNA sequences for novel human and rat and mouse orphan SNORF25 receptor. The invention also relates to constructing SNORF25 gene expression vector to produce recombinant protein using various eukaryotic cell lines. Methods for and results from SNORF25 functional studies also provided. The increased cAMP response of SNORF25-transfected cells in response to trans retinoic acid (ATRA) and phospholipids (like PAF C18 or C16, and lyso-PAF C18 or C16) are detected. The stimulation of CFTR by ATRA in oocyte expressing SNORF25 is also detected. Also disclosed are antibodies directed to mammalian SNORF25 receptors, probes and antisense for diagnosis and therapy of SNORF25 related abnormality, transgenic nonhuman animals, methods of treating related abnormalities, as well as methods of determining binding of compds. to mammalian SNORF25 receptors, methods of identifying agonists and antagonists of SNORF25 receptors, and agonists and antagonists so identified.

ST cDNA sequence human orphan SNORF25 receptor protein; rat cDNA sequence orphan SNORF25 receptor protein; mouse cDNA sequence orphan SNORF25 receptor protein

IT Animal cell line
(293, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(3T3, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Trichoplusia ni
(5B-4 cell from, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CFTR, stimulation, SNORF25 involved in; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(CHO, mouse Y1, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(COS-7, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Drug screening
Molecular cloning
Nucleic acid hybridization
Signal transduction, biological
Viral vectors
(DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Primers (nucleic acid)
Probes (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(LMTK-, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(SF9, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Human
Mus
Rattus norvegicus
(SNORF25 cDNA cloned from; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Orphan receptors
RL: ANT (Analyte); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(SNORF25; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(Sf21 cell, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(Trichoplusia ni 5B-4 cell, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Insecta
(cells from, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(for human SNORF25 orphan receptor; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT cDNA sequences
(for human and rat and mouse orphan SNORF25 receptors; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT **Eubacteria**
Eukaryota
Insecta
Yeast
(host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell
(mammalian, host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Melanocyte
(melanophore, from Xenopus, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Protein motifs
(membrane-spanning, seven; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Diagnosis
(mol.; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, to mammalian SNORF25; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal tissue
(mouse SNORF25 mRNA expression profile in; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal cell line
(mouse Y1, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Protein sequences
(of human and rat and mouse orphan SNORF25 receptors; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT mRNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(of mouse SNORF25, tissue expression; DNA encoding SNORF25 receptor

from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Xenopus
(oocyte cell or melanophore cell from, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Egg
(oocyte, from Xenopus, expression host; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Plasmid vectors
(pEXJ-mSNORF25-f, mouse orphan receptor SNORF25 expression vector; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Plasmid vectors
(pEXJT3T7-hSNORF25, human orphan receptor SNORF25 expression vector; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Plasmid vectors
(pcDNA3.1-rSNORF25, rat orphan receptor SNORF25 expression vector; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Antisense oligonucleotides
Ribozymes
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(to mammalian SNORF25 mRNA; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Antiserums
(to mammalian SNORF25; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Animal
(transgenic, non-human, of SNORF25; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT Baculoviridae
(vector based on; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT 553687-95-9P, Orphan receptor SNORF25 (human) 553687-96-0P, Orphan receptor SNORF25 (mouse) 553687-98-2P
RL: ANT (Analyte); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT 302-79-4, ATRA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cAMP stimulation by; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT 553687-93-7 553687-94-8 553687-97-1
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT **60-92-4**, CAMP
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(stimulation, SNORF25 involved in; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT 553689-99-9 553690-00-9 553690-01-0 553690-02-1 553690-03-2
553690-04-3 553690-05-4 553690-06-5 553690-07-6 553690-08-7
553690-09-8 553690-10-1 553690-11-2 553690-12-3 553690-13-4
553690-14-5 553690-15-6 553690-16-7 553690-17-8 553690-18-9
553690-19-0 553690-20-3 553690-21-4 553690-22-5 553690-23-6
553690-24-7 553690-25-8 553690-26-9 553690-27-0
RL: PRP (Properties)
(unclaimed nucleotide sequence; dNA encoding SNORF25 receptor from

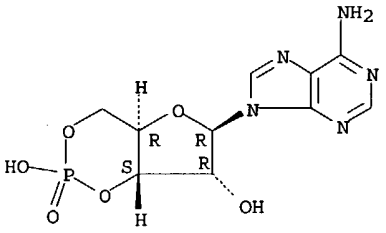
human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

IT **60-92-4**, CAMP
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(stimulation, SNORF25 involved in; DNA encoding SNORF25 receptor from human and rat and mouse, related functional assay, and use thereof in drug screening and therapy)

RN 60-92-4 HCAPLUS

CN Adenosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:334534 HCAPLUS

DN 138:349744

ED Entered STN: 02 May 2003

TI Nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses

IN Smith, Kelli E.; Linemeyer, David; Gerald, Christophe; Branchek, Theresa; Weinshank, Richard L.; Forray, Carlos

PA USA

SO U.S. Pat. Appl. Publ., 76 pp., Cont.-in-part of Appl. No. PCT/US97/01301.
CODEN: USXXCO

DT **Patent**

LA English

IC ICM C12P021-02
ICS C12N005-06; C07K014-705; C07H021-04

NCL 435069100; 435320100; 435325000; 530350000; 536023500

CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 2, 6, 13, 14

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2003082672	A1	20030501	US 1997-899112	19970723	<--
	US 6586191	B2	20030701			
	US 5972624	A	19991026	US 1996-626685	19960401	<--
	WO 9726853	A2	19970731	WO 1997-US1301	19970124	<--
	WO 9726853	A3	19971023			
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, US, US, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
	US 2003215823	A1	20031120	US 2002-285019	20021031	<--
PRAI	US 1996-590494	B2	19960124	<--		
	US 1996-626046	B2	19960401	<--		
	US 1996-626685	A2	19960401	<--		
	US 1996-721837	B2	19960927	<--		
	WO 1997-US1301	A2	19970124	<--		
	US 1997-899112	A1	19970723	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 2003082672	ICM	C12P021-02	
	ICS	C12N005-06; C07K014-705; C07H021-04	
	NCL	435069100; 435320100; 435325000; 530350000; 536023500	
US 2003082672	ECLA	C07K014/72	<--
US 5972624	ECLA	C07K014/72	<--
US 2003215823	ECLA	C07K014/72	<--

AB This invention provides isolated nucleic acids encoding mammalian galanin receptors, isolated galanin receptor proteins, vectors comprising isolated nucleic acid encoding a mammalian galanin receptor, cells comprising such vectors, antibodies directed to a mammalian galanin receptor, nucleic acid probes useful for detecting nucleic acid encoding a mammalian galanin receptor, antisense oligonucleotides complementary to unique sequences of nucleic acid encoding a mammalian galanin receptor, nonhuman transgenic animals which express DNA encoding a normal or a mutant mammalian galanin receptor, as well as methods of determining binding of compds. to mammalian galanin receptors. A galanin receptor was isolated from a rat hypothalamic cDNA library and characterized in heterologous expression systems by galanin binding assays and receptor signaling assays. The pharmacol. properties identified a new receptor subtype named GALR2. A human homolog the the rat GALR2 receptor was also cloned. The invention claims GALR2 receptor subtype-selective agonists and antagonists as therapeutic agents for eating disorders, pain and Alzheimer's disease.

ST cDNA sequence human rat galanin receptor GALR2; mammalian galanin receptor GALR2 agonist antagonist appetite pain Alzheimers

IT Animal cell line
(293, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell line
(3T3, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell line
(CHO, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell line
(COS-7, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Second messenger system
Signal transduction, biological
(GALR2 receptor signaling; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Ligands
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GALR2 receptor-binding; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Plasmid vectors
(K985, K1045, B029, and B039; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell line
(LMTK-, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell line
(SF9, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell line
(Sf21, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Neuropeptide Y receptors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Y5, antagonists; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Drugs
(appetite stimulants; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Appetite
(bulimia; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Chemistry
(chemical compds., GALR2 receptor agonists and antagonists; nucleic acids

encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Genetic element
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cis regulatory element, tissue specific; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Molecular association
(competitive binding to GALR2 receptor; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(derivs., antisense; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Gene, animal
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(for galanin receptor GALR2; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Cell membrane
(from recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Gene targeting
(gene knock-out; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inducible; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Translation, genetic
(inhibition, GALR2 mRNA antisense; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Phospholipids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(inositol-containing, hydrolysis, GALR2 receptor signaling; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Genetic element
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(intron; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Galanin receptors
RL: ANT (Analyte); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(isoform GALR2; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Animal cell
(mammalian, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Melanocyte
(melanophore, Xenopus, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Diagnosis
(mol.; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU

(Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Alleles
Alzheimer's disease
Analgesics
Anorexia
Anti-Alzheimer's agents
Antiobesity agents
Appetite depressants
Canidae
DNA fingerprinting
Drug screening
Drugs
Epitopes
Feeding
Gene therapy
Human
Immunoassay
Mammalia
Molecular cloning
Mutagenesis
Nucleic acid hybridization
Obesity
Pain
Protein sequences
Rattus
Rodentia
Susceptibility (genetic)
Vertebrata
cDNA sequences
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT mRNA
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT RNA
RL: ANT (Analyte); BUU (Biological use, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Fusion proteins (chimeric proteins)
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Antisense RNA
Antisense oligonucleotides
Ribozymes
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for

identification of receptor agonists and antagonists, and therapeutic uses)

IT Egg
(oocyte, Xenopus, recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Biological transport
(receptor-mediated; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Baculoviridae
Cell
Eubacteria
Insecta
Xenopus
Yeast
(recombinant host; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Appetite
(stimulants; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Drug delivery systems
(sustained-release; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Protein motifs
(third intracellular domain; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT Laboratory animal
Mus
(transgenic; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT 114547-31-8, Galanin (rat)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(GALR2 receptor agonist; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT **60-92-4**, Cyclic AMP 506-32-1, Arachidonic acid 14127-61-8, Ca2+, biological studies 37589-80-3
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(GALR2 receptor signaling; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT 519068-14-5P, Galanin receptor (rat isoform GALR2) 519068-16-7P, Galanin receptor (human isoform GALR2)
RL: ANT (Analyte); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

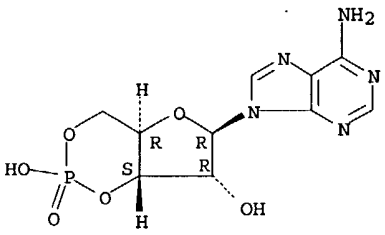
IT 9075-08-5, Restriction endonuclease
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT 519068-13-4 519068-15-6 519068-17-8 519068-18-9
RL: ANT (Analyte); BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)

IT 519135-03-6 519135-04-7 519135-05-8 519135-06-9 519135-07-0
519135-08-1 519135-11-6 519135-12-7 519135-13-8 519135-14-9
519135-15-0 519135-16-1 519135-17-2 519135-18-3 519135-19-4
519135-20-7 519135-21-8 519135-22-9 519135-23-0 519135-24-1
519135-25-2 519135-26-3 519135-27-4

RL: PRP (Properties)
(unclaimed nucleotide sequence; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)
IT 519135-09-2 519135-10-5 519135-28-5
RL: PRP (Properties)
(unclaimed protein sequence; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)
IT **60-92-4**, Cyclic AMP
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(GALR2 receptor signaling; nucleic acids encoding mammalian galanin receptor GALR2, methods for identification of receptor agonists and antagonists, and therapeutic uses)
RN 60-92-4 HCAPLUS
CN Adenosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:174372 HCAPLUS
DN 138:225988
ED Entered STN: 07 Mar 2003
TI Bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants
IN Perriello, Felix Anthony
PA USA
SO U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DT **Patent**
LA English
IC ICM C12S001-00
ICS C12M001-00
NCL 435262500; 435289100
CC 60-1 (Waste Treatment and Disposal)
Section cross-reference(s): 10, 51, 61
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003044966	A1	20030306	US 2002-205798	20020726 <--
PRAI US 2001-308481P	P	20010727 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003044966	ICM	C12S001-00
	ICS	C12M001-00
	NCL	435262500; 435289100

AB Biol. remediation of a sulfur-containing pollutant uses a hydrocarbon, especially an alkane, to stimulate the growth of hydrocarbon-metabolizing bacteria. The bacterial treatment can be used to develop anaerobic conditions, in which the hydrocarbon is oxidized and the sulfur pollutants are reduced; alternatively, an oxidant (air or O2) can be added to drive the treatment to aerobic conditions. The hydrocarbon-metabolizing bacteria can be selected from acidophilic, alkaliphilic, anaerobic, anoxygenic, autotrophic, chemolithotrophic, chemoorganotrophic, chemotrophic, halophilic, methanogenic, neutrophilic, phototrophic, saprophytic, thermoacidophilic, thermophilic bacteria, facultative aerobes, and/or microaerophilic anaerobes. Some species that are effective include Putida, Rubrisubalbicans, Aeruginosa, Paradoxus, Asteroides, Brasiliensis, Restricta, Globerula, Indologenes, Meningosepticum, Acidovorans, Delafieldii, Rhodochrous, Erythropolis, Fascians, Barkeri, etc. Types of sulfur-containing pollutants that can be remediated, especially in wastewater,

groundwater, and surface water, include sulfate, sulfite, sulfides disulfides, thiols, alkanesulfonic acids, dialkyl sulfides, thiosulfate, thiofurans, thiocyanates, thioureas, thioethers, dialkyl disulfides, sulfonic esters, SO2, sour fuel gases, and elemental sulfur.

ST wastewater biol remediation sulfur compd; water purifn biol remediation sulfur compd; sulfur metabolizing bacteria hydrocarbon growth mediator; hydrocarbon metabolizing bacteria sulfur compd removal water

IT Alkanes, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(C1-4, growth stimulants; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(acidophilic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Wastewater treatment
(aerobic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(alkalophilic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Sulfonic acids, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(alkanesulfonic, salts; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Disulfides
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(alkyl; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Wastewater treatment
(anaerobic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Thiols (organic), processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(aryl; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(autotrophic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Acidovorax
Aerobic **bacteria**
Aeromonas
Alcaligenes
Anaerobic **bacteria**
Aureobacterium
Chryseobacterium
Clavibacter
Comamonas
Corynebacterium
Cytophaga
Gordonia (**bacterium**)
Halophilic **bacteria**
Methanogenic **bacteria**
Micrococcus
Nocardia
Phyllobacterium
Pseudomonas
Rhodococcus
Shewanella
Sphingobacterium
Stenotrophomonas
Variovorax
(bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Disulfides
Isothiocyanates
Sulfates, processes
Sulfides, processes
Sulfites
Sulfones

Sulfonic acids, processes
Sulfoxides
Thiocyanates
Thioethers
Thiols (organic), processes
Thiosulfates
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Wastewater treatment
Water purification
(biol.; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(chemolithotrophic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(chemoorganotrophic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(chemotrophic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Group VIA element compounds
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(dithionites; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Sulfonic acids, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(esters; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Aerobic **bacteria**
(facultative; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Alkanes, processes
Alkenes, processes
Alkynes
Aromatic hydrocarbons, processes
Hydrocarbons, processes
Polyolefins
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(growth stimulants; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(hydrocarbon-metabolizing; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(microaerophilic, anaerobes; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(neutrophilic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(phototrophic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

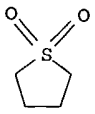
IT Alkynes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(polyalkynes, growth stimulants; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT Aromatic hydrocarbons, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(polymers, growth stimulants; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(saprobic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)

IT **Eubacteria**
(sulfur-metabolizing; bacterial remediation of sulfur-containing pollutants

in water using hydrocarbons as growth stimulants)
IT **Eubacteria**
(sulfur-reducing; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
IT Group VIA element compounds
Sulfur acids
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(tetrathionates; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
IT **Eubacteria**
(thermoacidophilic; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
IT Phenols, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(thiolphenols; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
IT 62-56-6D, Thiourea, derivs. 108-98-5D, Thiophenol, derivs. 110-02-1D, Thiophene, derivs. **126-33-0D**, Sulfolane, derivs. 302-04-5, Thiocyanate, processes 7314-30-9, Dimethylsulfoniopropionate 7446-09-5, Sulfur dioxide, processes 7664-93-9D, Sulfuric acid, esters 7704-34-9, Sulfur, processes 7783-06-4, Hydrogen sulfide, processes 14265-45-3, Sulfite 14383-50-7, Thiosulfate (S2O32-) 14808-79-8, Sulfate, processes 14844-07-6, Dithionite 15536-54-6, Tetrathionate 18496-25-8, Sulfide
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
IT 74-82-8, Methane, processes 74-84-0, Ethane, processes 74-98-6, Propane, processes 106-97-8, Butane, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(growth stimulant; bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
IT **126-33-0D**, Sulfolane, derivs.
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(bacterial remediation of sulfur-containing pollutants in water using hydrocarbons as growth stimulants)
RN 126-33-0 HCAPLUS
CN Thiophene, tetrahydro-, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)



L26 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:748742 HCAPLUS
DN 137:261859
ED Entered STN: 03 Oct 2002
TI Cytokine-free culture of dendritic cells
IN Vachula, Mona; Van Epps, Dennis E.; Alzona, Mortimer T.; Aono, Frederick M.
PA Nexell Therapeutics Inc., USA
SO U.S., 37 pp., Cont.-in-part of U. S. Ser. No. 840,213.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM C12N005-00
NCL 435325000
CC 15-1 (Immunochemistry)
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6458585	B1	20021001	US 1997-904124	19970731 <--

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     WO 9806823           A2    19980219    WO 1997-US13759        19970813 <--
     WO 9806823           A3    19980507
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             MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
             TJ, TM, TT, UA, UG, UZ, VN
         RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
             GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
             GN, ML, MR, NE, SN, TD, TG
     AU 9740521           A1    19980306    AU 1997-40521          19970813 <--
     EP 918847            A2    19990602    EP 1997-938120         19970813 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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PRAI US 1996-696747       B2    19960814  <--
     US 1997-840213       A2    19970411  <--
     US 1997-904124       A     19970731  <--
     WO 1997-US13759      W     19970813  <--
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
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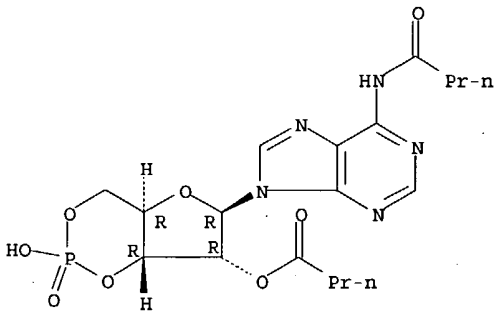
 US 6458585       ICM    C12N005-00
                  NCL    435325000
 US 6458585       ECLA   C12N005/06B10G; C12N005/06B10B                    <--
 WO 9806823       ECLA   C12N005/06B11C; C12N005/06B11D                    <--
AB   A method for producing human dendritic cells for therapeutic purposes
     which allows culture-deriving dendritic cells using no cytokines, or
     reduced cytokines.  The method involves culturing mononuclear cells from
     blood or bone marrow in a medium containing at least one agent such as a
     calcium ionophore, e.g. A23187, theophylline, prostaglandin E1, dibutyryl
     cAMP, Vitamin D3, Vitamin E, retinoic acid, or a fatty acid.  The culture
     is maintained for a sufficient time, typically 4-14 days, to produce a
     culture enriched for dendritic cells, as evidenced by at least about 2.5%
     of total cells exhibiting dendritic cell processes, or a dendritic dell
     antigen such as CD80, CD86, or CD1a.  Also provided is a method to produce
     antigen-specific human T-cells by pulsing the dendritic cells obtained by
     the method of the invention with an antigen such as a viral, tumor,
     bacterial, or cell surface antigen, and then co-culturing T-cells with the
     antigen-pulsed dendritic cells.  The cells are useful for treatment of
     viral or bacterial infections, useful as a cancer vaccine, and useful to
     induce tolerance of allo- or xeno-grafts.
ST   dendritic cell differentiation culture medium hematopoietic cell T
     lymphocyte
IT   Hematopoietic precursor cell
        (CD34+; procedure for the induction of antigen-specific human T-cells)
IT   Prostaglandins
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (E; procedure for the induction of human dendritic cells from
        hematopoietic precursor cells)
IT   Animal virus
     CD4-positive T cell
     CD8-positive T cell
       Eubacteria
     T cell (lymphocyte)
        (procedure for the induction of antigen-specific human T-cells)
IT   Antigens
     CD45RO (antigen)
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (procedure for the induction of antigen-specific human T-cells)
IT   Animal tissue culture
     Bone marrow
     Cell differentiation
     Cord blood
     Culture media
     Hematopoietic precursor cell
     Human
     Mononuclear cell (leukocyte)
     Therapy
        (procedure for the induction of human dendritic cells from
        hematopoietic precursor cells)
IT   Fatty acids, biological studies
     Interleukin 4
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (procedure for the induction of human dendritic cells from
        hematopoietic precursor cells)
IT   Antigens
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
```

(surface; procedure for the induction of antigen-specific human T-cells)
IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(tumor-associated; procedure for the induction of antigen-specific human T-cells)
IT 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 58-55-9, Theophylline, biological studies 60-33-3, Linoleic acid, biological studies 67-97-0, Vitamin D3 112-80-1, Oleic acid, biological studies 302-79-4, Retinoic acid **362-74-3**, Dibutyryl cAMP 373-49-9, Palmitoleic acid 463-40-1, Linolenic acid 745-65-3, Prostaglandin E1 1406-18-4, Vitamin E 52665-69-7, a23187 83869-56-1, Gm-csf
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(procedure for the induction of human dendritic cells from hematopoietic precursor cells)
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; WO 9320185 1993 HCAPLUS
(2) Banchereau; US 6004807 A 1999 HCAPLUS
(3) Cohen; US 6010905 A 2000 HCAPLUS
(4) Emerson; US 5399493 A 1995 HCAPLUS
(5) Emerson; US 5437994 A 1995 HCAPLUS
(6) Emerson; US 5605822 A 1997 HCAPLUS
(7) Emerson; US 5646043 A 1997 HCAPLUS
(8) Emerson; US 5670147 A 1997 HCAPLUS
(9) Emerson; US 5670351 A 1997 HCAPLUS
(10) Jaffe; Pediatric Pathology 1993, V13, P821 MEDLINE
(11) Kanz; US 5866115 A 1999
(12) Lardon; Experimental Hematology 1994, V22, P903 HCAPLUS
(13) Maraskovsky; US 6017527 A 2000 HCAPLUS
(14) Mayani; Experimental Hematology 1995, V23, P422 HCAPLUS
(15) Snoeck; J Exp Med 1996, V183, P705 HCAPLUS
(16) Steinman; US 5851756 A 1998 HCAPLUS
(17) Steinman; US 5994126 A 1999 HCAPLUS
(18) Tedder; US 5849589 A 1998 HCAPLUS
(19) Thomas; Stem cells 1996, V14, P196 MEDLINE
(20) Thomson; US 5871728 A 1999 HCAPLUS
(21) Williams; International Review of Cytology 1994, V153, P41 HCAPLUS
IT **362-74-3**, Dibutyryl cAMP
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(procedure for the induction of human dendritic cells from hematopoietic precursor cells)
RN 362-74-3 HCAPLUS
CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:464364 HCAPLUS
DN 135:56050
ED Entered STN: 28 Jun 2001
TI Enhancement of oxazolidinone antibacterial agents activity by using arginine derivatives
IN Bohanon, Michael John
PA Pharmacia & Upjohn Company, USA
SO U.S., 6 pp., Cont.-in-part of U.S. Ser. No. 81,164, abandoned.
CODEN: USXXAM

DT **Patent**
LA English
IC ICM A61K038-00
ICS A61K031-535
NCL 514020000
CC 1-5 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6251869	B1	20010626	US 1999-313465	19990517 <--
	PT 1077718	T	20021231	PT 1999-921365	19990513 <--
	ES 2182521	T3	20030301	ES 1999-921365	19990513 <--
	CZ 291945	B6	20030618	CZ 2000-4259	19990513 <--
	ZA 2000005923	A	20011023	ZA 2000-5923	20001023 <--
PRAI	US 1998-81164	B2	19980518 <--		

CLASS

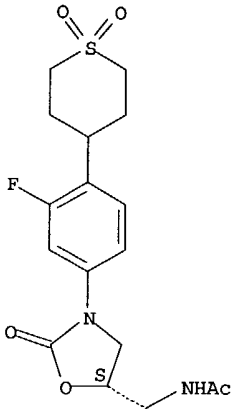
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6251869	ICM	A61K038-00
	ICS	A61K031-535
	NCL	514020000

OS MARPAT 135:56050
AB Methods and compns. are provided for enhancing the effectiveness of oxazolidinone antibacterial agents against gram-neg. organisms infection by using an arginine derivative, e.g. L-phenylalanyl-L-arginyl-.beta.-naphthylamide.
ST antibacterial oxazolidinone enhancement arginine deriv; phenylalanyl arginyl naphthylamide antibacterial oxazolidinone enhancement
IT Antibacterial agents
Drug interactions
Escherichia coli
Gram-negative **bacteria**
Haemophilus influenzae
Klebsiella pneumoniae
Moraxella catarrhalis
Pseudomonas aeruginosa
(arginine derivative for oxazolidinone antibacterial agent enhancement)
IT Aerobic **bacteria**
(gram-neg.; arginine derivative for oxazolidinone antibacterial agent enhancement)
IT Drug delivery systems
(oral; arginine derivative for oxazolidinone antibacterial agent enhancement)
IT Drug delivery systems
(parenterals; arginine derivative for oxazolidinone antibacterial agent enhancement)
IT Drug interactions
(synergistic; arginine derivative for oxazolidinone antibacterial agent enhancement)
IT Drug delivery systems
(topical; arginine derivative for oxazolidinone antibacterial agent enhancement)
IT Drug delivery systems
(transdermal; arginine derivative for oxazolidinone antibacterial agent enhancement)
IT 74-79-3D, Arginine, derivs. 51667-26-6D, Oxazolidinone, derivs. 115871-02-8, L-Phenylalanyl-L-arginyl-.beta.-naphthylamide 188974-31-4 **188974-61-0 188974-75-6** 216868-69-8 **226991-61-3 226991-62-4 345897-48-5 345897-50-9 345897-52-1 345897-55-4**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(arginine derivative for oxazolidinone antibacterial agent enhancement)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; WO 9917791 1999 HCAPLUS
(2) Barbachyn; J Med Chem 1996, V39(3), P680 HCAPLUS
(3) Brickner; J Med Chem 1996, V39(3), P673 HCAPLUS
(4) Gadwood; US 5977373 1999 HCAPLUS
(5) Hestter; US 6998406 1999
(6) Trias; US 5989832 1999 HCAPLUS
IT **188974-61-0 188974-75-6 226991-61-3 226991-62-4 345897-48-5 345897-50-9 345897-52-1 345897-55-4**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(arginine derivative for oxazolidinone antibacterial agent enhancement)

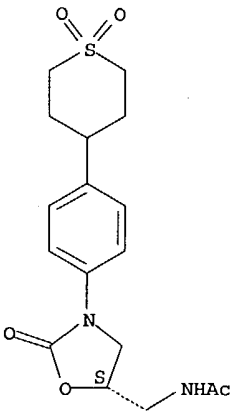
RN 188974-61-0 HCAPLUS
CN Acetamide, N-[[(5S)-3-[3-fluoro-4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-2-oxo-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



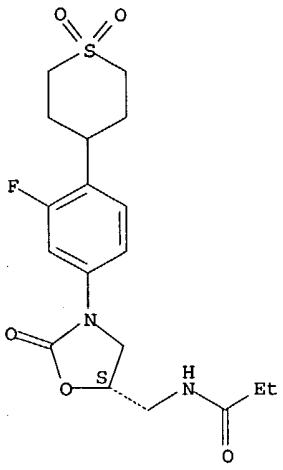
RN 188974-75-6 HCAPLUS
CN Acetamide, N-[[(5S)-2-oxo-3-[4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



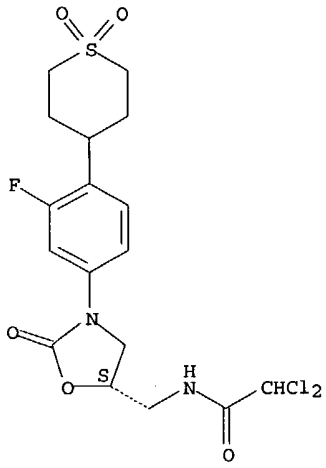
RN 226991-61-3 HCAPLUS
CN Propanamide, N-[[(5S)-3-[3-fluoro-4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-2-oxo-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



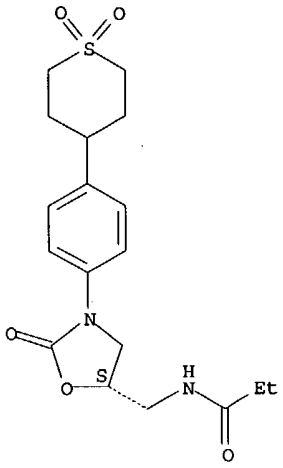
RN 226991-62-4 HCAPLUS
CN Acetamide, 2,2-dichloro-N-[[(5S)-3-[3-fluoro-4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-2-oxo-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



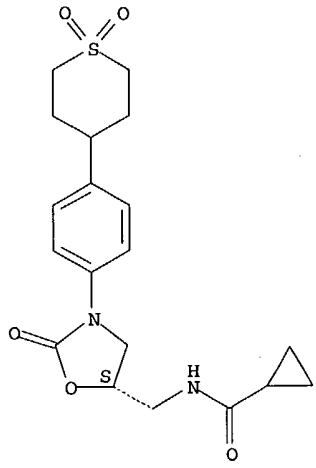
RN 345897-48-5 HCAPLUS
CN Propanamide, N-[[(5S)-2-oxo-3-[4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



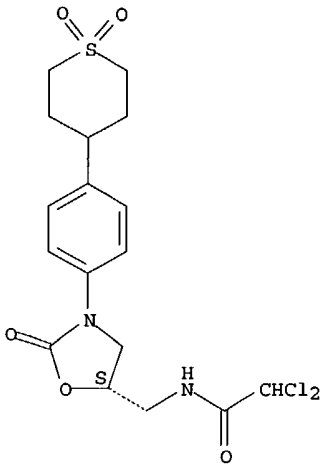
RN 345897-50-9 HCAPLUS
CN Cyclopropanecarboxamide, N-[[(5S)-2-oxo-3-[4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



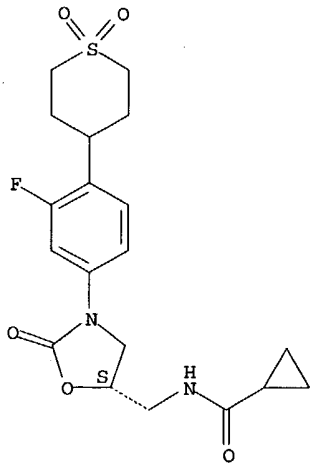
RN 345897-52-1 HCAPLUS
CN Acetamide, 2,2-dichloro-N-[[(5S)-2-oxo-3-[4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 345897-55-4 HCAPLUS
CN Cyclopropanecarboxamide, N-[[(5S)-3-[3-fluoro-4-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)phenyl]-2-oxo-5-oxazolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 7 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:574406 HCAPLUS
DN 127:187871
ED Entered STN: 08 Sep 1997
TI Functionalized hydrophilic acridinium esters
IN Law, Say-Jong; Sotiriou-Leventis, Chariklia; Natrajan, Anand; Jiang, Qingping; Connolly, Peter B.; Kilroy, John P.; McCudden, Constance R.; Tirrell, Stephen M.
PA Chiron Diagnostics Corp., USA
SO U.S., 28 pp., Cont.-in-part of U.S. 5,449,556.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM C12Q001-68
NCL 435006000
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 2, 3, 14, 15, 27
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5656426	A	19970812	US 1994-225165	19940408 <--

	JP 09025422	A2	19970128	JP 1996-179488	19890731 <--
	US 5227489	A	19930713	US 1992-826186	19920122 <--
	US 5449556	A	19950912	US 1993-32231	19930317 <--
	US 5595875	A	19970121	US 1994-325845	19941019 <--
	CA 2186463	AA	19951019	CA 1995-2186463	19950406 <--
	WO 9527702	A1	19951019	WO 1995-IB244	19950406 <--
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9520816	A1	19951030	AU 1995-20816	19950406 <--
	AU 703436	B2	19990325		
	EP 754178	A1	19970122	EP 1995-913298	19950406 <--
	EP 754178	B1	20030115		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI				
	BR 9507307	A	19970902	BR 1995-7307	19950406 <--
	JP 10503169	T2	19980324	JP 1995-526216	19950406 <--
	EP 982298	A1	20000301	EP 1999-203889	19950406 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI				
	AT 231130	E	20030215	AT 1995-913298	19950406 <--
	ES 2188654	T3	20030701	ES 1995-913298	19950406 <--
	US 5656500	A	19970812	US 1995-440427	19950512 <--
PRAI	US 1988-226639	B1	19880801	<--	
	US 1992-826186	A3	19920122	<--	
	US 1993-32231	A2	19930317	<--	
	JP 1989-199178	A3	19890731	<--	
	US 1993-32321	A3	19930317	<--	
	US 1994-225165	A	19940408	<--	
	US 1994-325845	A1	19941019	<--	
	EP 1995-913298	A3	19950406	<--	
	WO 1995-IB244	W	19950406	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5656426	ICM	C12Q001-68
	NCL	435006000

OS MARPAT 127:187871

AB Novel acridinium esters are disclosed that are useful, either alone or when incorporated into liposomes, as chemiluminescent agents in binding assays (e.g., immunoassays and gene probe assays) with improved sensitivity. In addition, the synthesis of these esters and their use in assays for detecting an analyte are described. In particular, assays for testosterone and the Rubella virus are disclosed.

ST acridinium ester chemiluminescent label binding assay; immunoassay acridinium ester label prepn; gene probe assay acridinium ester prepn; serum testosterone detn chemiluminescence immunoassay; rubella virus IgG detn chemiluminescent label

IT Proteins, specific or class
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(DNA-binding, acridinium ester conjugates; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Immunoglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(G, to Rubella virus; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Rubella virus
(IgG; functionalized hydrophilic acridinium esters preparation for binding assays)

IT **Bacteria (Eubacteria)**
Virus
(acridinium ester conjugates; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Allergens
Antibodies
Antigens
Avidins
Cytokines
DNA
Haptens
Hormones, animal, preparation
Macromolecular compounds

Neurotransmitters
Oligonucleotides
Peptides, preparation
Proteins, general, preparation
RNA
Receptors
Toxins
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(acridinium ester conjugates; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Onium compounds
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(acridinium, esters; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Diagnosis
(agents; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Crosslinking agents
(bifunctional; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Oligonucleotides
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(chemiluminescent-labeled; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Immunoglobulins
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fragments, acridinium ester conjugates; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Blood analysis
Body fluid
Immunoassay
Liposomes
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT Polyoxyalkylenes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT Genetic methods
(gene probe assay; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Steroids, preparation
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(hormones, acridinium ester conjugates; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Chemiluminescent substances
(labels; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(monoclonal; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Albumins, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(serum; functionalized hydrophilic acridinium esters preparation for binding assays)

IT Hormones, animal, preparation
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(steroid, acridinium ester conjugates; functionalized hydrophilic acridinium esters preparation for binding assays)

IT 50-28-2, Estradiol, analysis 58-22-0, Testosterone
RL: ANT (Analyte); ANST (Analytical study)
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT 7704-34-9DP, Sulfur, acridinium esters containing, preparation 7723-14-0DP, Phosphorus, acridinium esters containing, preparation 7727-37-9DP, Nitrogen, acridinium esters containing, preparation 7782-44-7DP, Oxygen, acridinium esters containing, preparation 9013-20-1DP, Streptavidin, acridinium ester conjugates 173406-73-0P 173406-74-1P 173406-75-2P 194357-81-8P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST

(Analytical study); PREP (Preparation); USES (Uses)
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT 9002-71-5, TSH
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(functionalized hydrophilic acridinium esters preparation for binding assays)

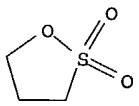
IT 108-88-3, Toluene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT 107-15-3, 1,2-Ethanediamine, reactions 124-09-4, 1,6-Hexanediamine, reactions **1120-71-4**, 1,3-Propanesultone 1122-58-3 1319-82-0, Aminocaproic acid 4039-32-1, Lithium bis(trimethylsilyl)amide 4855-96-3 4919-37-3, 3,5-Dimethyl-4-hydroxybenzoic acid 5336-90-3, 9-Acridinecarboxylic acid 6066-82-6, N-Hydroxysuccinimide 7719-09-7, Thionyl chloride 25322-68-3 67992-78-3 158788-56-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT 66074-67-7P, 9-Acridinecarbonyl chloride 115853-72-0P 115853-74-2P 142645-74-7P 173406-81-0P 173406-82-1P 173406-83-2P 173406-84-3P 173406-85-4P 173406-86-5P 173406-87-6P 194357-64-7P 194357-76-1P 194357-83-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(functionalized hydrophilic acridinium esters preparation for binding assays)

IT **1120-71-4**, 1,3-Propanesultone
RL: RCT (Reactant); RACT (Reactant or reagent)
(functionalized hydrophilic acridinium esters preparation for binding assays)

RN 1120-71-4 HCAPLUS
CN 1,2-Oxathiolane, 2,2-dioxide (8CI, 9CI) (CA INDEX NAME)



L26 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:70354 HCAPLUS
DN 126:171596
ED Entered STN: 31 Jan 1997
TI Novel 1,4,5-substituted imidazole compounds useful as cytokine inhibitors
IN Adams, Jerry L.; Sheldrake, Peter W.; Gallagher, Timothy F.; Garigipati, Ravishanker
PA Smithkline Beecham Corporation, USA
SO U.S., 42 pp., Cont.-in-part of U.S. Ser. No. 369, 964, abandoned.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM A61K031-505
ICS A61K031-535; C07D403-04; C07D413-14
NCL 514235800
CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5593992	A	19970114	US 1995-472366	19950607 <--
	EP 1227091	A2	20020731	EP 2002-76580	19940715 <--
	EP 1227091	A3	20020807		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
	EP 1227092	A2	20020731	EP 2002-76582	19940715 <--
	EP 1227092	A3	20020807		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
	EP 1229035	A1	20020807	EP 2002-76581	19940715 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				

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     EP 1291346          A1    20030312    EP 2002-79534          19940715 <--
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI
     IL 116455           A1    20010724    IL 1995-116455         19951219 <--
     IL 134324           A1    20010826    IL 1995-134324         19951219 <--
     IL 134322           A1    20010913    IL 1995-134322         19951219 <--
     IL 134323           A1    20011125    IL 1995-134323         19951219 <--
     IN 184957           A     20001007    IN 1996-DE11           19960103 <--
     ZA 9600094          A     19960724    ZA 1996-94             19960108 <--
     CA 2209938          AA    19960718    CA 1996-2209938        19960111 <--
     WO 9621452          A1    19960718    WO 1996-US546          19960111 <--
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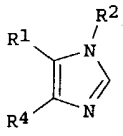

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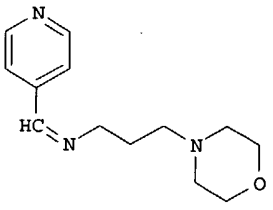

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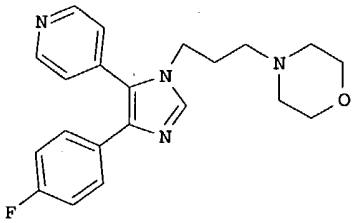

III

AB Novel 1,4,5-substituted imidazole compds. I and compns. for use in therapy as cytokine inhibitors are disclosed [wherein R1 = (un)substituted 4-pyridyl, pyrimidinyl, quinolyl, isoquinolinyl, quinazolin-4-yl, 1-imidazolyl, 1-benzimidazolyl; R2 = N3, heterocyclyl, heterocyclylalkyl, alk(en/yn)yl, aryl, aralkyl, wide variety of N-containing and O-containing groups; R4 = (un)substituted Ph, naphthyl, heteroaryl]. The subset of I [R1 = (un)substituted pyrimidinyl; R4 = (un)substituted Ph or naphthyl] is claimed. Examples include approx. 100 syntheses and several bioassays. For instance, cyclization of the isocyanide 4-FC6H4CH(N.tplbond.C)SC6H4Me-

4 with the imine II (prepns. given), in CH2Cl2 in the presence of the base 1,5,7-triazabicyclo[4.4.0]dec-5-ene (TBD), gave 51% title compound III. The latter compound was active in an in vitro test for inhibition of LPS-induced prostaglandin endoperoxide synthase-2 (PGHS-2) protein expression in human monocytes.

ST imidazole prepn cytokine inhibitor

IT Intestine, disease
(Crohn's, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Respiratory distress syndrome
(adult, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Antiarteriosclerotics
(antiatherosclerotics; preparation of imidazole derivs. as cytokine inhibitors)

IT Pancreas
(beta cells, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Malaria
(cerebral, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Lung, disease
Lung, disease
(chronic inflammation, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Eye, disease
(conjunctivitis, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Muscle, disease
(degeneration, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Kidney, disease
(glomerulonephritis, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Cytokines
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(inhibitors; preparation of imidazole derivs. as cytokine inhibitors)

IT Heart, disease
Kidney, disease
(injury, reperfusion, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Brain, disease
(malaria, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Anticoagulants
Antipyretics
Antirheumatic agents
Immunosuppressants
(preparation of imidazole derivs. as cytokine inhibitors)

IT Interleukin 1
Interleukin 6
Interleukin 8
Tumor necrosis factors
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(preparation of imidazole derivs. as cytokine inhibitors)

IT Bone
(resorption, inhibitors; preparation of imidazole derivs. as cytokine inhibitors)

IT Lung, disease
(sarcoidosis, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Gram-negative **bacteria**
(sepsis, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Shock (circulatory collapse)
(septic, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Spinal column
(spondylitis, rheumatoid, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Brain, disease
(stroke, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Osteoporosis
(therapeutic agents; preparation of imidazole derivs. as cytokine

inhibitors)
IT Shock (circulatory collapse)
(toxic shock syndrome, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Diabetes mellitus
Eczema
Multiple sclerosis
Psoriasis
Sepsis
Silicosis
Sunburn
Transplant rejection
(treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Intestine, disease
(ulcerative colitis, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT 39391-18-9, Prostaglandin endoperoxide synthase
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(2, inhibition of; preparation of imidazole derivs. as cytokine inhibitors)
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(intermediate; preparation of imidazole derivs. as cytokine inhibitors)
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(preparation of imidazole derivs. as cytokine inhibitors)

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(starting material; preparation of imidazole derivs. as cytokine inhibitors)

IT **180869-31-2P**
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(preparation of imidazole derivs. as cytokine inhibitors)

RN 180869-31-2 HCAPLUS

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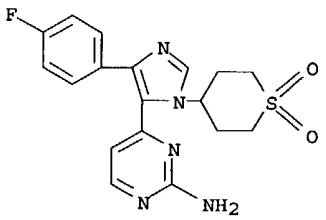

L26 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:70353 HCAPLUS
DN 126:171595
ED Entered STN: 31 Jan 1997
TI Imidazole compounds, use as cytokine inhibitors, and process of making them
IN Adams, Jerry L.; Boehm, Jeffrey C.
PA USA
SO U.S., 38 pp., Cont.-in-part of U.S. Ser. No. 369, 964.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM A61K031-47
ICS A61K031-535; C07D401-04; C07D413-14
NCL 514235200
CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
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	JP 1995-504744	A3	19940715	<--		
	AU 1998-71850	A3	19980602	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 5593991	ICM	A61K031-47	
	ICS	A61K031-535; C07D401-04; C07D413-14	
	NCL	514235200	
EP 1291346	ECLA	C07D401/04; C07D401/04; C07D401/14; C07D401/14; C07D040/04; C07D405/14; C07D405/14	<--
JP 2004083600	FTERM	4C031/BA02; 4C055/AA01; 4C055/BA01; 4C055/BA02; 4C055/BA06; 4C055/CA01; 4C055/DA06; 4C055/DA07; 4C055/DA08; 4C055/DA13; 4C055/DA16; 4C055/DA21; 4C055/DA30; 4C055/DA33; 4C055/DB02; 4C055/DB10; 4C055/FA15; 4C055/FA32; 4C055/FA37; 4C063/AA01; 4C063/AA03; 4C063/BB01; 4C063/BB02; 4C063/BB09; 4C063/CC12; 4C063/CC14; 4C063/CC25; 4C063/CC29; 4C063/CC54; 4C063/DD10; 4C063/DD12; 4C063/EE01; 4C063/EE05; 4C086/AA02; 4C086/AA03; 4C086/AA04; 4C086/BC38; 4C086/BC42; 4C086/BC73; 4C086/GA07; 4C086/GA08; 4C086/GA09; 4C086/MA01; 4C086/MA04; 4C086/NA14; 4C086/ZA16; 4C086/ZA45; 4C086/ZA59; 4C086/ZA66; 4C086/ZA89; 4C086/ZA94; 4C086/ZA96; 4C086/ZB11; 4C086/ZB15; 4C086/ZB35; 4C086/ZC31; 4C086/ZC35	<--
JP 2004099622	FTERM	4C063/AA01; 4C063/AA03; 4C063/BB01; 4C063/BB02; 4C063/CC25; 4C063/CC29; 4C063/DD12; 4C063/DD25; 4C063/EE01; 4C086/AA01; 4C086/AA02; 4C086/AA03; 4C086/AA04; 4C086/BC21; 4C086/BC38; 4C086/BC42; 4C086/BC73; 4C086/GA07; 4C086/GA08; 4C086/GA13; 4C086/GA16; 4C086/MA01; 4C086/NA14; 4C086/ZA59; 4C086/ZA66; 4C086/ZA68; 4C086/ZA96; 4C086/ZB11; 4C086/ZB35; 4C086/ZC55; 4C086/ZC61; 4H006/AA01; 4H006/AA02; 4H006/AB20; 4H006/BA66; 4H039/CA80;	

4H039/CA99 <--
JP 2004149541 FTERM 4C083/AA082; 4C083/AA122; 4C083/AB172; 4C083/AB232;
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4C083/AB342; 4C083/AB351; 4C083/AB352; 4C083/AB361;
4C083/AB362; 4C083/AB432; 4C083/AC022; 4C083/AC072;
4C083/AC102; 4C083/AC122; 4C083/AC182; 4C083/AC242;
4C083/AC302; 4C083/AC352; 4C083/AC422; 4C083/AC432;
4C083/AC442; 4C083/AC482; 4C083/AC842; 4C083/AD152;
4C083/AD352; 4C083/AD662; 4C083/BB51; 4C083/CC04;
4C083/CC05; 4C083/CC12; 4C083/CC25; 4C083/DD17;
4C083/DD22; 4C083/DD23; 4C083/DD27; 4C083/DD31;
4C083/EE06; 4C083/EE10; 4C083/EE12; 4C083/EE41;
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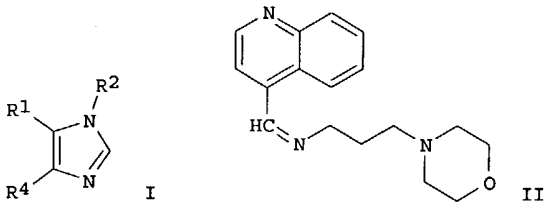
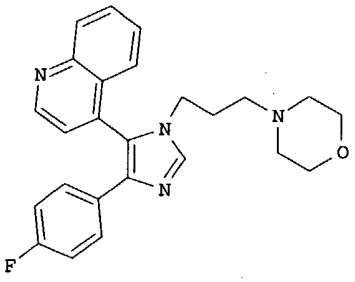
GI



I II



III

AB Novel 1,4,5-substituted imidazole compds. I and compns. for use in therapy as cytokine inhibitors are disclosed [wherein R1 = (un)substituted 4-pyridyl, pyrimidinyl, quinolyl, isoquinolinyl, quinazolin-4-yl, 1-imidazolyl, 1-benzimidazolyl; R2 = N3, heterocyclyl, heterocyclylalkyl, alk(en/yn)yl, aryl, aralkyl, wide variety of N-containing and O-containing groups; R4 = (un)substituted Ph, naphthyl, heteroaryl]. The subset of I [R1 = (un)substituted quinolyl or isoquinolinyl; R4 = (un)substituted Ph or naphthyl] is claimed. Examples include approx. 100 syntheses and several bioassays. For instance, cyclization of the isocyanide 4-FC6H4CH(N.tplbond.C)SC6H4Me-4 with the imine II (prepns. given), in CH2Cl2 in the presence of the base 1,5,7-triazabicyclo[4.4.0]dec-5-ene (TBD), gave 48% title compound III. Another compound I, namely the analog of III with R1 = 4-pyridyl, was active in an in vitro test for inhibition of LPS-induced prostaglandin endoperoxide synthase-2 (PGHS-2) protein expression in human monocytes.

ST imidazole prepn cytokine inhibitor

IT Intestine, disease
(Crohn's, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Respiratory distress syndrome
(adult, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Antiarteriosclerotics
(antiatherosclerotics; preparation of imidazole derivs. as cytokine inhibitors)

IT Pancreas
(beta cells, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Malaria
(cerebral, treatment; preparation of imidazole derivs. as cytokine inhibitors)

IT Lung, disease

Lung, disease
(chronic inflammation, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Eye, disease
(conjunctivitis, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Muscle, disease
(degeneration, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Kidney, disease
(glomerulonephritis, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Cytokines
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(inhibitors; preparation of imidazole derivs. as cytokine inhibitors)
IT Heart, disease
Kidney, disease
(injury, reperfusion, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Brain, disease
(malaria, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Anticoagulants
Antipyretics
Antirheumatic agents
Immunosuppressants
(preparation of imidazole derivs. as cytokine inhibitors)
IT Interleukin 1
Interleukin 6
Interleukin 8
Tumor necrosis factors
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(preparation of imidazole derivs. as cytokine inhibitors)
IT Bone
(resorption, inhibitors; preparation of imidazole derivs. as cytokine inhibitors)
IT Lung, disease
(sarcoidosis, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Gram-negative **bacteria**
(sepsis, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Shock (circulatory collapse)
(septic, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Spinal column
(spondylitis, rheumatoid, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Brain, disease
(stroke, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Osteoporosis
(therapeutic agents; preparation of imidazole derivs. as cytokine inhibitors)
IT Shock (circulatory collapse)
(toxic shock syndrome, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Diabetes mellitus
Eczema
Multiple sclerosis
Psoriasis
Sepsis
Silicosis
Sunburn
Transplant rejection
(treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT Intestine, disease
(ulcerative colitis, treatment; preparation of imidazole derivs. as cytokine inhibitors)
IT 39391-18-9, Prostaglandin endoperoxide synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(2, inhibition of; preparation of imidazole derivs. as cytokine inhibitors)
IT 536-57-2P 1074-68-6P 6321-07-9P, 4-Morpholinobutylamine 31183-76-3P

41838-46-4P 42182-68-3P, N-(4-Pyridinylmethyl)-N-methylformamide
56752-29-5P, Pyridine-4-carboxaldehyde (2-propenyl)imine 63875-01-4P,
4-Formyl-2-methylpyridine 80863-24-7P, Pyridine-4-carboxaldehyde
tert-butylimine 90796-54-6P 93138-82-0P, Pyridine-4-carboxyaldehyde
(2,2-diethoxyethyl)imine 154620-01-6P 165806-84-8P 165806-85-9P
165806-86-0P 165806-87-1P, Pyridine-4-carboxaldehyde
(3-chloropropyl)imine 165806-88-2P 165806-89-3P 165806-90-6P
165806-91-7P 165806-92-8P 165806-93-9P 165806-94-0P 165806-95-1P
165806-96-2P 165806-97-3P, Pyridine-4-carboxaldehyde cyclopropylimine
165806-98-4P, Pyridine-4-carboxaldehyde isopropylimine 165806-99-5P,
Pyridine-4-carboxaldehyde (cyclopropylmethyl)imine 165807-00-1P
165807-01-2P 165807-03-4P 165807-04-5P 165807-05-6P,
2-Aminopyrimidine-4-carboxaldehyde dimethyl acetal 165807-06-7P,
2-Aminopyrimidine-4-carboxaldehyde 165807-07-8P 165807-08-9P
165807-09-0P, 2-Aminopyrimidine-4-carboxaldehyde (2-propyl)imine
165807-10-3P, 2-Aminopyrimidine-4-carboxaldehyde (cyclopropylmethyl)imine
165807-11-4P 165807-12-5P 165807-13-6P 165807-14-7P 165807-15-8P
165807-16-9P, 2-Methylpyridine-4-carboxaldehyde (cyclopropylmethyl)imine
165807-17-0P 165807-19-2P 165807-20-5P 166895-19-8P 180869-25-4P
180869-26-5P 180869-36-7P, 2-(Methylthio)pyrimidine-4-carboxaldehyde
dimethyl acetal 180869-38-9P, 2-(N-Methylamino)pyrimidine-4-
carboxaldehyde dimethyl acetal 180869-39-0P, 2-(N-Methylamino)pyrimidine-
4-carboxaldehyde 180869-40-3P 180869-42-5P 180869-43-6P
180869-44-7P, 2-Acetamidopyrimidine-4-carboxaldehyde 187217-89-6P
187217-91-0P 187217-92-1P 187217-93-2P 187217-94-3P 187217-95-4P
187217-96-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(intermediate; preparation of imidazole derivs. as cytokine inhibitors)

IT 162581-10-4P
RL: ARG (Analytical reagent use); BAC (Biological activity or effector,
except adverse); BSU (Biological study, unclassified); SPN (Synthetic
preparation); ANST (Analytical study); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(preparation of imidazole derivs. as cytokine inhibitors)

IT 165806-10-0P 165806-11-1P 165806-12-2P 165806-19-9P 165806-21-3P
165806-23-5P 165806-25-7P 165806-27-9P 165806-29-1P 165806-36-0P
165806-37-1P 165806-38-2P 165806-43-9P 165806-45-1P 165806-47-3P
165806-48-4P 165806-53-1P 165806-55-3P 165806-57-5P 165806-60-0P
165806-62-2P 165806-68-8P 165806-69-9P 180869-13-0P 180869-28-7P
180869-34-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT
(Reactant or reagent); USES (Uses)
(preparation of imidazole derivs. as cytokine inhibitors)

IT 152122-36-6P, 1-Methyl-4-phenyl-5-(4-pyridyl)imidazole 165806-09-7P
165806-13-3P 165806-14-4P 165806-15-5P 165806-16-6P 165806-17-7P
165806-18-8P 165806-20-2P 165806-22-4P 165806-24-6P 165806-26-8P
165806-28-0P 165806-30-4P 165806-32-6P 165806-33-7P 165806-34-8P
165806-35-9P 165806-39-3P 165806-40-6P 165806-41-7P 165806-42-8P
165806-44-0P 165806-46-2P 165806-49-5P 165806-50-8P 165806-51-9P
165806-52-0P 165806-54-2P 165806-56-4P 165806-58-6P 165806-59-7P
165806-61-1P 165806-63-3P 165806-64-4P 165806-65-5P 165806-66-6P
165806-67-7P 165806-70-2P 165806-71-3P 165806-72-4P 165806-73-5P
165806-74-6P 165806-75-7P 165806-76-8P 165806-77-9P 165806-78-0P
165806-79-1P 165806-80-4P 165806-81-5P 165806-82-6P 165806-83-7P
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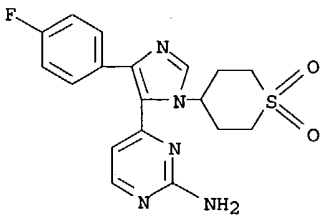
180869-19-6P 180869-21-0P 180869-23-2P 180869-29-8P 180869-30-1P
180869-31-2P 180869-32-3P 180869-33-4P 180869-35-6P
180869-37-8P 180869-45-8P 181630-74-0P 187217-90-9P 187217-97-6P
187217-98-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of imidazole derivs. as cytokine inhibitors)

IT 50-01-1 62-56-6, Thiourea, reactions 64-18-6, Formic acid, reactions
75-04-7, Ethanamine, reactions 75-12-7, Formamide, reactions 75-31-0,
Isopropylamine, reactions 75-64-9, reactions 100-46-9, Benzylamine,
reactions 100-47-0, Benzonitrile, reactions 103-67-3,
N-Benzylmethylamine 104-96-1, 4-(Methylthio)aniline 106-45-6
107-11-9, 2-Propen-1-amine 108-95-2, Phenol, reactions 108-98-5,
Benzenethiol, reactions 109-89-7, Diethylamine, reactions 110-89-4,
Piperidine, reactions 110-91-8, Morpholine, reactions 123-00-2,
4-(3-Aminopropyl)morpholine 123-39-7 123-75-1, Pyrrolidine, reactions
124-40-3, reactions 124-63-0, Methanesulfonyl chloride 401-95-6

407-25-0 454-89-7 455-19-6 459-57-4, p-Fluorobenzaldehyde 587-04-2
645-36-3 765-30-0, Cyclopropylamine 766-84-7 824-79-3 872-85-5,
Pyridine-4-carboxaldehyde 927-68-4 1193-03-9, 4-Amino-1-
methylpiperidine dihydrochloride 1445-73-4 1783-81-9,
3-(Methylthio)aniline 1822-51-1 2038-03-1, 4-(2-Aminoethyl)morpholine
2214-53-1 2516-47-4, Cyclopropanemethanamine 2987-53-3,
2-(Methylthio)aniline 3251-07-8 4138-35-6 4363-93-3,
4-Quinolinecarboxaldehyde 4637-24-5 5188-07-8, Sodium methanethiolate
5394-18-3 6276-54-6, 3-Chloropropylamine hydrochloride 6287-38-3
6342-56-9 13910-49-1 21770-81-0 23588-51-4 36768-62-4 50541-93-0
58859-46-4, 1-Carbethoxy-4-aminopiperidine 59193-77-0 67751-23-9,
1,1-Dimethoxy-2-oxo-4-(dimethylamino)-3-butene 73771-35-4,
m-(Methylthio)benzaldehyde 87120-72-7, 1-(t-Butoxycarbonyl)-4-
aminopiperidine 101066-61-9 152121-39-6 180869-56-1 181630-93-3
187217-99-8, 1-(2,2,2-Trifluoroethyl)-4-aminopiperidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of imidazole derivs. as cytokine inhibitors)

IT **180869-31-2P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of imidazole derivs. as cytokine inhibitors)

RN 180869-31-2 HCAPLUS
CN 2-Pyrimidinamine, 4-[4-(4-fluorophenyl)-1-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)-1H-imidazol-5-yl]- (9CI) (CA INDEX NAME)



L26 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:577828 HCAPLUS
DN 125:269861
ED Entered STN: 28 Sep 1996
TI Solution for prolonged organ preservation
IN Stern, David M.; Oz, Mehmet C.; Nowygrod, Roman; Koga, Shin; Pinsky, David J.
PA The Trustees of Columbia University In the City of New York, USA
SO U.S., 71 pp., Cont.-in-part of U.S. 5,370,989.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM A01N001-02
NCL 435001100
CC 9-11 (Biochemical Methods)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5552267	A	19960903	US 1994-350319	19941205 <--
	US 5370989	A	19941206	US 1994-206197	19940303 <--
PRAI	US 1992-863197		19920403	<--	
	US 1994-206197		19940303	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5552267	ICM	A01N001-02
	NCL	435001100

AB An aqueous solution for organ preservation or maintenance contains: a vasodilator in an amount sufficient to maintain vascular homeostasis; D-glucose and Mg2+ in amts. sufficient to support intracellular function and maintenance of cellular bioenergetics; macromols. of mol. weight >20,000 in an amount sufficient to maintain endothelial integrity and cellular viability; >100 mM K+; and a buffer in an amount sufficient to maintain the average pH of the organ preservation or maintenance solution during the period of organ preservation at or above physiol. pH. A suitable solution for heart preservation (Columbia University solution) contained D-glucose 67.4, MgSO4

5, K gluconate 95, adenosine 5, N-acetylcysteine 0.5, dibutyryl cAMP 2, KH2PO4 25 mM, heparin 10 U/mL, dextran 50 g/L, cefazolin 0.5, nitroglycerin 0.1 mg/mL, verapamil 10, BHA 50, and BHT 50 .mu.M. Restoration of the cAMP 2nd messenger pathway, and supplementation of the NO pathway with nitroglycerin, nitroprusside, or L-arginine, enhanced cardiac preservation for transplantation in a heterotopic rat model. The NO/cGMP pathway also had a critical role in successful lung preservation.

ST organ preservation vasodilator glucose magnesium

IT Named reagents and solutions
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Columbia University solution; solution for prolonged organ preservation)

IT Neutrophil
(accumulation in lung graft, nitroglycerin effect on)

IT Hypoxia
(cAMP of vascular smooth muscle in)

IT Anions
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(impermeant; solution for prolonged organ preservation)

IT Blood platelet aggregation inhibitors
(nitroglycerin; solution for prolonged organ preservation)

IT Anticoagulants and Antithrombotics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Buffer substances and systems
Heart
Lung
Organ preservation
Transplant and Transplantation
Vasodilators
(solution for prolonged organ preservation)

IT Biopolymers
Polysaccharides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(solution for prolonged organ preservation)

IT Ion channel blockers
(calcium, solution for prolonged organ preservation)

IT Toxins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pertussis, solution for prolonged organ preservation)

IT Perfusion
(re-, of heart transplant, cAMP in relation to)

IT 9036-21-9, CAMP phosphodiesterase 9068-52-4, CGMP phosphodiesterase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; solution for prolonged organ preservation)

IT 10102-43-9, Nitric oxide, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(of heart; solution for prolonged organ preservation)

IT **60-92-4**, CAMP
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(of vascular smooth muscle, hypoxia effect on)

IT 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological studies 52-53-9, Verapamil 55-63-0, Nitroglycerin 58-61-7, Adenosine, biological studies **60-92-4D**, CAMP, analogs 74-79-3, Arginine, biological studies 96-82-2, Lactobionic acid 128-37-0, BHT, biological studies 299-27-4, Potassium gluconate **362-74-3**, Dibutyryl cAMP 526-95-4, Gluconic acid 616-91-1, N-Acetylcysteine 1406-05-9, Penicillin 1406-18-4, Vitamin E 3632-91-5, Magnesium gluconate 7439-95-4, Magnesium, biological studies 7440-09-7, Potassium, biological studies 7487-88-9, Magnesium sulfate, biological studies **7665-99-8D**, CGMP, analogs 7778-77-0, Monopotassium phosphate 7778-80-5, Potassium sulfate, biological studies 8001-27-2, Hirudin 9004-54-0, Dextran, biological studies 9005-49-6, Heparin, biological studies 9054-89-1, Superoxide dismutase 10043-83-1 15078-28-1, Nitroprusside 25013-16-5 25322-68-3 25953-19-9, Cefazolin 28822-58-4, IBMX **31356-94-2**, 8-Bromo-cGMP 37762-06-4 61413-54-5, Rolipram 100643-96-7, Indolidan

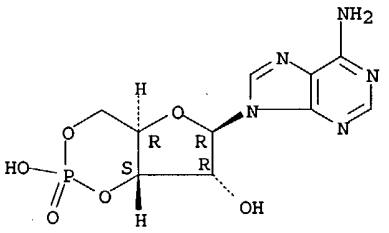
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(solution for prolonged organ preservation)

IT 141588-27-4 142008-29-5, CAMP-dependent protein kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(solution for prolonged organ preservation)

IT **60-92-4**, CAMP
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(of vascular smooth muscle, hypoxia effect on)

RN 60-92-4 HCAPLUS
CN Adenosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

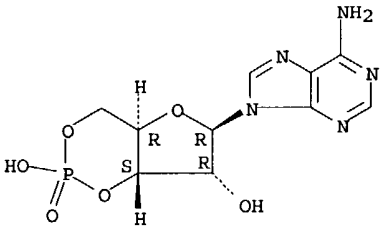
Absolute stereochemistry.



IT **60-92-4D**, CAMP, analogs **362-74-3**, Dibutyryl cAMP
7665-99-8D, CGMP, analogs **31356-94-2**, 8-Bromo-cGMP
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(solution for prolonged organ preservation)

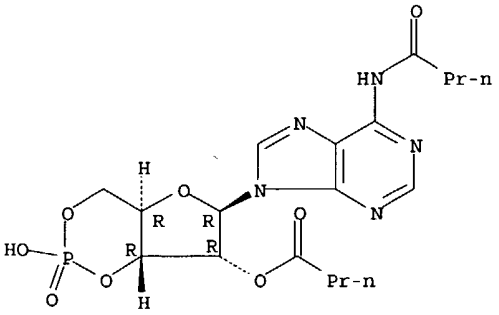
RN 60-92-4 HCAPLUS
CN Adenosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



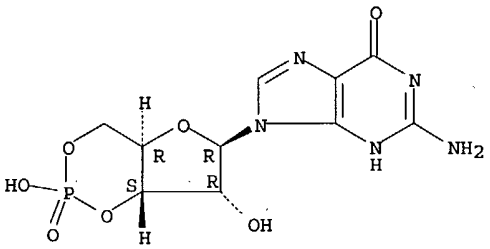
RN 362-74-3 HCAPLUS
CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



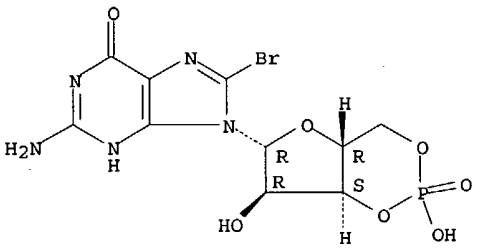
RN 7665-99-8 HCAPLUS
CN Guanosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 31356-94-2 HCAPLUS
CN Guanosine, 8-bromo-, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:392133 HCAPLUS
DN 125:114389
ED Entered STN: 09 Jul 1996
TI Preparation of cephalosporin antibiotics
IN Wei, Chung-Chen; Angehrn, Peter
PA Hoffmann-La Roche Inc., USA
SO U.S., 117 pp., Cont.-in-part of U.S. Ser. No. 48, 688, abandoned.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM C07D501-34
ICS A61K031-545
NCL 514202000
CC 26-5 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1
FAN.CNT 2

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PI	US 5523400	A	19960604	US 1994-213562	19940321	<--
	EP 620225	A1	19941019	EP 1994-104997	19940330	<--
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	R: AT, BE, CH, DE, DK, ES, FR, GR, IE, IT, LI, LU, MC, NL, PT, SE					
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	PT 620225	T	20030331	PT 1994-104997	19940330	<--
	ES 2185634	T3	20030501	ES 1994-104997	19940330	<--
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	GB 2277737	B2	19960925			
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	CN 1105365	A	19950719	CN 1994-104429	19940415	<--

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	HU 71252	A2	19951128	HU 1994-1080	19940415 <--
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	IN 177851	A	19970222	IN 1994-MA299	19940415 <--
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	RO 114965	B3	19990930	RO 1994-637	19940415 <--
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	US 1994-213562	A	19940321 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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	ICS	A61K031-545
	NCL	514202000
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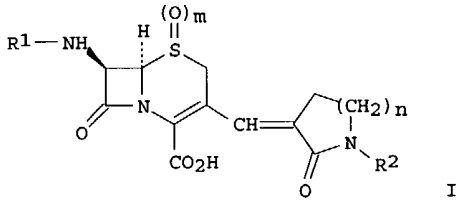
OS MARPAT 125:114389

GI



I

AB The title compds. I [R1 is an acyl group derived from a carboxylic acid, hydrogen, or an amino protecting group; R2 is hydrogen, hydroxy, lower alkyl-Qp -, cycloalkyl, lower alkoxy, lower alkenyl, cycloalkenyl, lower alkynyl, aralkyl-Qp -, aryl-Qp -, aryloxy, aralkoxy or a heterocyclic ring, the lower alkyl, cycloalkyl, lower alkoxy, lower alkenyl, cycloalkenyl, lower alkynyl, aralkyl, aryl, aryloxy, aralkoxy and the heterocyclic ring being unsubstituted or substituted with at least one group selected from carboxy, amino, nitro, oxo, cycloalkyl, cyano, lower alkyl, lower alkoxy, hydroxy, halogen, -CONR4 R5, --N(R5)COOR9, R5 CO--, R5 OCO-- or R5 COO-- where R4 is hydrogen, lower alkyl, or cycloalkyl; R5 is hydrogen or lower alkyl; R9 is lower alkyl, lower alkenyl or a carboxylic acid protecting group; Q is --CO-- or --SO2 --; m is 0 or 1; n is 0, 1 or 2; p is 0 or 1] as well as their pharmaceutically acceptable salts and easily hydrolyzable esters are prepared Thus, [6R-[3(E),6.alpha.,7.beta.]]-3-[[(2-oxo-1-phenyl)-3-pyrrolidinylidene]methyl]-7-amino-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid trifluoroacetic acid salt was reacted with 2-(2-aminothiazol-4-yl)-(Z)-2-(methoxyimino)acetic acid 2-benzothiazolyl thioester in water-THF containing NaHCO3 at room temperature for 4 h to give 98% the title compound [6R-3(E),6.alpha.,7.beta.(Z)]-7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-3-[(2-oxo-1-phenyl-3-pyrrolidinylidene)methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid monosodium salt. The compds. are useful as oral or parenteral antibiotics against a broad spectrum of organisms. The minium inhibition concentration of I [R1 = 2-(2-amino-4-thiazolyl)-2-[(carboxymethoxy)imino]acetyl, R2 = CH2-CF3, n = 1, m = 0] disodium salt (also prepared) against Escherichia coli was 0.0625 mg/L.

ST cephalosporin analog prepn antibacterial

IT **Bactericides**, Disinfectants, and Antiseptics
(preparation of cephalosporin analogs as antibacterials)

IT 161671-70-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of cephalosporin analogs as antibacterials)

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161675-46-3P 161675-48-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cephalosporin analogs as antibacterials)

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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cephalosporin analogs as antibacterials)

IT 62-53-3, Aniline, reactions 373-88-6, 2,2,2-Trifluoroethylamine hydrochloride 33125-05-2 41459-42-1, 3-Bromo-2-(bromomethyl)propionic acid 53064-79-2, Pivaloyloxymethyl iodide 80756-85-0 82820-87-9 118411-48-6 135263-64-8 161671-78-9 161674-42-6 161675-58-7 161675-84-9 161676-36-4 178946-62-8 178946-73-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cephalosporin analogs as antibacterials)

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(preparation of cephalosporin analogs as antibacterials)

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RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cephalosporin analogs as antibacterials)

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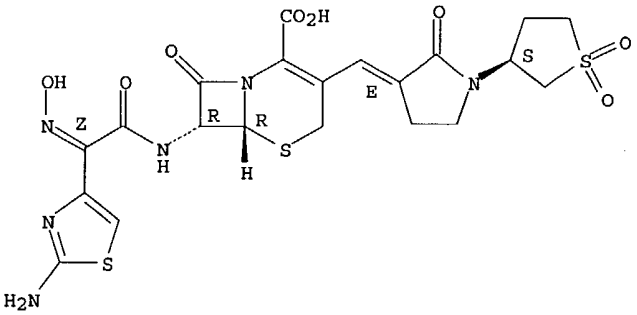
179235-05-3P 179465-43-1P 179465-44-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cephalosporin analogs as antibacterials)

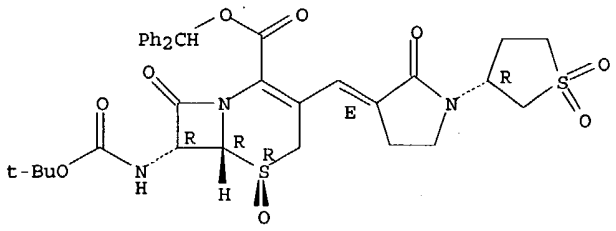
RN 161672-96-4 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, [6R-[3[E(S*)],6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



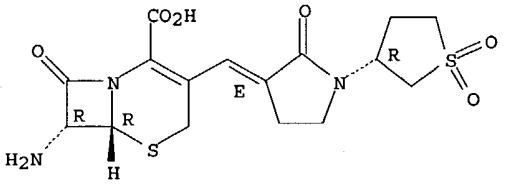
RN 161675-06-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, 5-oxide, [5R-[3[E(R*)],5.alpha.,6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



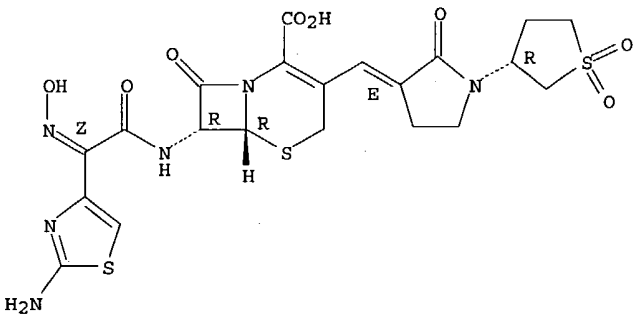
RN 161675-94-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, [6R-[3[E(R*)],6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



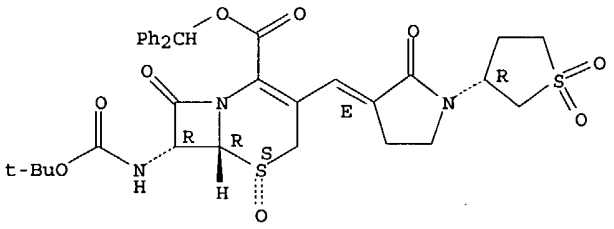
RN 161754-79-6 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, [6R-[3[E(R*)],6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



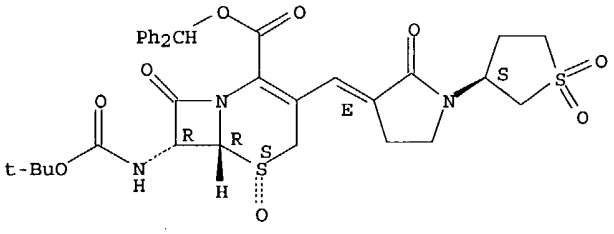
RN 161754-84-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, 5-oxide, [5S-[3[E(S*)],5.alpha.,6.beta.,7.alpha.]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



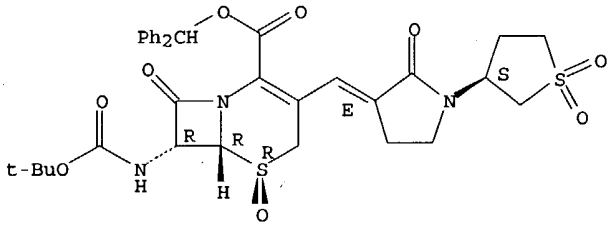
RN 161754-88-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, 5-oxide, [5S-[3[E(R*)],5.alpha.,6.beta.,7.alpha.]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



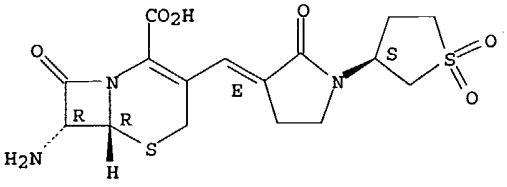
RN 161754-89-8 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, 5-oxide, [5R-[3[E(S*)],5.alpha.,6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 161754-90-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, [6R-[3[E(S*)],6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

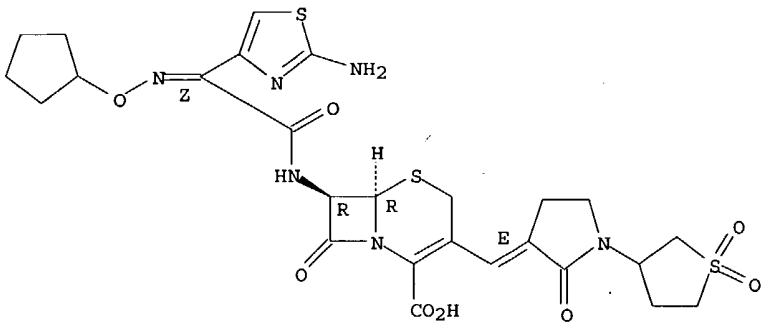
Absolute stereochemistry.
Double bond geometry as shown.



RN 179091-52-2 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2-amino-4-thiazolyl)[(cyclopentyloxy)imino]acetyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, monosodium salt, [6R-[3(E),6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

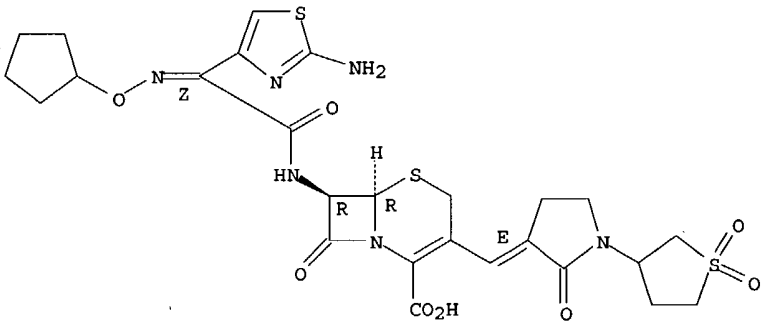
Absolute stereochemistry.
Double bond geometry as shown.



● Na

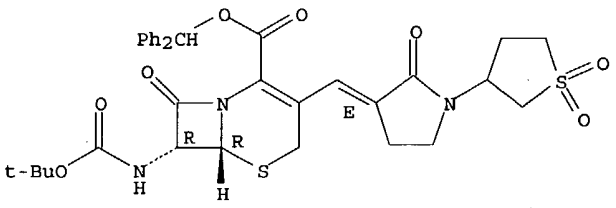
RN 179235-05-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)[(cyclopentyloxy)imino]acetyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, [6R-[3(E),6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 179465-43-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, [6R-[3(E),6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

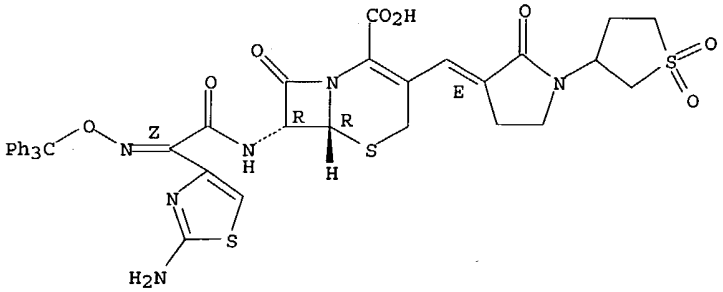
Absolute stereochemistry.
Double bond geometry as shown.



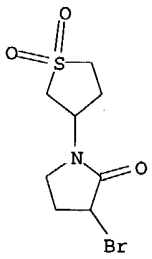
RN 179465-44-2 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)[(triphenylmethoxy)imino]acetyl]amino]-8-oxo-3-

[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, [6R-[3(1E),6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

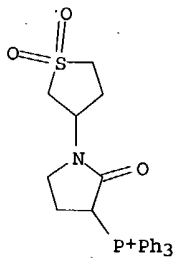
Absolute stereochemistry.
Double bond geometry as shown.



IT **178946-33-3P 178946-52-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cephalosporin analogs as antibacterials)
RN 178946-33-3 HCAPLUS
CN 2-Pyrrolidinone, 3-bromo-1-(tetrahydro-1,1-dioxido-3-thienyl)- (9CI) (CA INDEX NAME)



RN 178946-52-6 HCAPLUS
CN Phosphonium, [2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinyl]triphenyl-, bromide (9CI) (CA INDEX NAME)

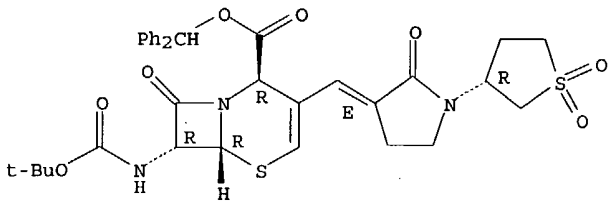


● Br^-

IT **161674-72-2P 161754-87-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cephalosporin analogs as antibacterials)
RN 161674-72-2 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-3-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, [2R-[2.alpha.,3[E(R*)],6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

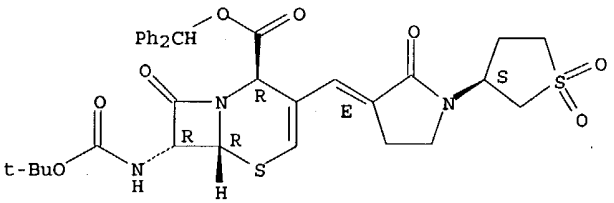
Absolute stereochemistry.

Double bond geometry as shown.



RN 161754-87-6 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-3-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-3-[[2-oxo-1-(tetrahydro-1,1-dioxido-3-thienyl)-3-pyrrolidinylidene]methyl]-, diphenylmethyl ester, [2R-[2.alpha.,3[E(S*)],6.alpha.,7.beta.]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L26 ANSWER 12 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:356928 HCAPLUS
DN 122:128116
ED Entered STN: 16 Feb 1995
TI Solution for prolonged organ preservation
IN Stern, David M.; Oz, Mehmet C.; Nowygrod, Roman; Koga, Shin; Pinsky, David J.
PA Trustees of Columbia University in the City of New York, USA
SO U.S., 13 pp. Cont. of U.S. Ser. No. 863,197, abandoned.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM A01N001-02
NCL 435001000
CC 9-11 (Biochemical Methods)
Section cross-reference(s): 13
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5370989	A	19941206	US 1994-206197	19940303 <--
	US 5552267	A	19960903	US 1994-350319	19941205 <--
PRAI	US 1992-863197		19920403	<--	
	US 1994-206197		19940303	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5370989	ICM	A01N001-02
	NCL	435001000

AB An aqueous solution for organ preservation or maintenance is provided which includes a vasodilator in an amount sufficient to maintain vascular homeostasis; D-glucose in an amount sufficient to support intracellular function and maintenance of cellular bioenergetics; magnesium ions in an amount sufficient to support intracellular function and maintenance of cellular bioenergetics; macromols. of mol. weight greater than 20,000 daltons in an amount sufficient to maintain endothelial integrity and cellular viability; potassium ions in a concentration greater than about 110 mM; and a buffer in an amount sufficient to maintain the average pH of the organ preservation or maintenance solution during the period of organ preservation at about the physiol. pH value. Also provided is a method of preserving or maintaining an organ which includes contacting the organ with the solution Data from e.g. a heterotropic rat heart transplant model are included.
ST organ preservation soln

IT Anions
Anticoagulants and Antithrombotics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Buffer substances and systems
Organ preservation
Reducing agents
Transplant and Transplantation
Vasodilators
(solution for prolonged organ preservation)

IT Macromolecular compounds
Polysaccharides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(solution for prolonged organ preservation)

IT Ion channel blockers
(calcium, solution for prolonged organ preservation)

IT Toxins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(pertussis, solution for prolonged organ preservation)

IT Heart
Lung
(transplant, solution for prolonged organ preservation)

IT 96-82-2
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(anion; solution for prolonged organ preservation)

IT 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological studies 52-53-9, Verapamil 55-63-0, Nitroglycerin 58-61-7, Adenosine, biological studies **60-92-4D**, Adenosine 3',5'-cyclic monophosphate, analogs 61-33-6, biological studies 128-37-0, Butylated hydroxytoluene, biological studies 299-27-4, Potassium gluconate **362-74-3**, Dibutyryl adenosine 3',5'-cyclic monophosphate 608-59-3, Gluconate 616-91-1, N-Acetylcysteine 1406-18-4, Vitamin E 3632-91-5, Magnesium gluconate 7439-95-4, Magnesium, biological studies 7440-09-7, Potassium, biological studies 7487-88-9, Magnesium sulfate, biological studies **7665-99-8D**, Guanosine 3',5'-cyclic monophosphate, analogs 7778-77-0, Monopotassium phosphate 7778-80-5, Potassium sulfate, biological studies 8001-27-2, Hirudin 9004-54-0, Dextran, biological studies 9005-49-6, Heparin, biological studies 10043-83-1, Magnesium phosphate 25013-16-5, Butylated hydroxyanisole 25322-68-3, Polyethylene glycol 25953-19-9, Cefazolin
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(solution for prolonged organ preservation)

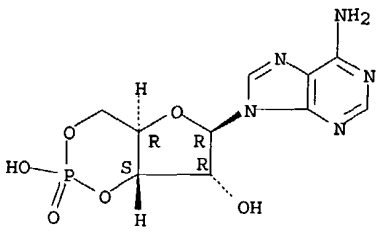
IT 70-18-8, Glutathione, biological studies
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(solution for prolonged organ preservation in relation to cellular glutathione production)

IT 7440-70-2, Calcium, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(solution for prolonged organ preservation with agent preventing calcium entry into cell)

IT **60-92-4D**, Adenosine 3',5'-cyclic monophosphate, analogs
362-74-3, Dibutyryl adenosine 3',5'-cyclic monophosphate
7665-99-8D, Guanosine 3',5'-cyclic monophosphate, analogs
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(solution for prolonged organ preservation)

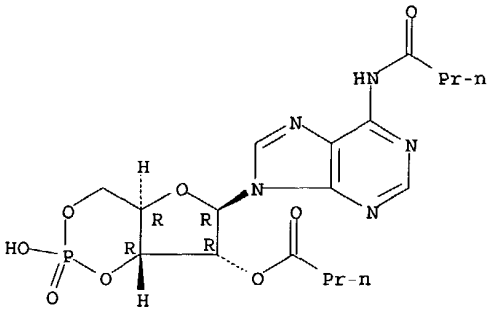
RN 60-92-4 HCAPLUS
CN Adenosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



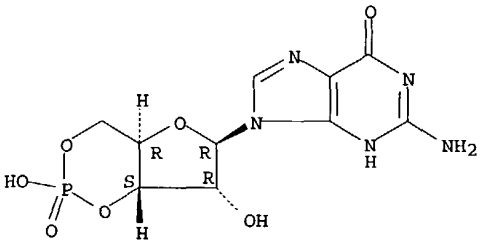
RN 362-74-3 HCAPLUS
CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 7665-99-8 HCAPLUS
CN Guanosine, cyclic 3',5'-(hydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:437684 HCAPLUS
DN 109:37684
ED Entered STN: 05 Aug 1988
TI Preparation of 3-thiadiazinylcephalosporin analogs as antibacterials
IN Skotnicki, Jerauld S.; Strike, Donald P.
PA American Home Products Corp., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM C07D501-36
ICS A61K031-545
NCL 540227000
CC 26-5 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 10
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4728733	A	19880301	US 1985-801460	19851125 <--
PRAI US 1985-801460		19851125 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4728733	ICM	C07D501-36
	ICS	A61K031-545
	NCL	540227000

OS CASREACT 109:37684; MARPAT 109:37684

GI For diagram(s), see printed CA Issue.

AB Title compds. I [R = H, alkyl, alkenyl, alkynyl, cycloalkyl, Ph; R1 = H, alkyl, alkali metal cation; A = COZNR4SO2, COZSO2NR4, CONR4ZSO2, NR4COZSO2; Z = (un)substituted vinylene, ethylene, o-phenylene, 2,3-naphthalenediyl; R4 = H, alkyl, Ph, naphthyl] were prepared Et(6R,7R)-3-(iodomethyl)-7-[[(Z)-(methoxyimino)[4-(triphenylmethyl)amino]-2-thiazolyl]acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylate (preparation given), 4-cyano-2H,6H-1,2,6-thiazin-3-one 1,1-dioxide mono-K salt (preparation given), and DMT were stirred at ambient temperature to give the cyanothiazidinyl derivative, which is treated with HCO2H at ambient temperature to give the primary amine on the thiazole ring (II) followed by displacement of the tert-Bu group with F3CCO2H to give (6R,7R)-7-[[(Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(4-cyano-3,6-dihydro-3-oxo-2H-1,2,6-thiadiazin-2-yl)methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, S3, S3-dioxide.CF3CO2H (III). In tests against Staphylococcus aureus (penicillin-sensitive and resistant), II and III had a min. inhibitory concentration of 64 and 32 .mu.g/mL, resp.

ST thiadiazinylcephalosporin prepn antibacterial; cephalosporin thiadiazinyl prepn antibacterial

IT **Bactericides**, Disinfectants, and Antiseptics
(thiadiazinylcephalosporins)

IT **66785-42-0**
RL: PROC (Process)
(conversion of, to potassium salt)

IT 7803-58-9, Sulfamide
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with Et ethoxymethylenecyanoacetate)

IT 7778-42-9, Sulfamoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with Me anthranilate)

IT 94-05-3, Ethyl ethoxymethylenecyanoacetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with sulfamide)

IT 134-20-3, Methyl anthranilate
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with sulfamoyl chloride)

IT **2225-37-8P 66785-49-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with (iodomethyl)thiaazabicyclooctenecarboxylate derivative)

IT 105514-47-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with benzylthiazine and thiazine derivs.)

IT **104862-72-8P 115166-54-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deprotection of)

IT **104862-66-0P 104862-67-1P 115151-48-9P**
115151-49-0P 115151-50-3P 115166-55-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as antibacterial)

IT 16029-98-4, Trimethylsilyl iodide
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution by, of acetoxythiaazabicyclooctenecarboxylate derivative)

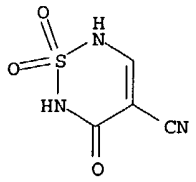
IT 68881-45-8
RL: PROC (Process)
(substitution of, with trimethylsilyl iodide)

IT 11111-12-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(thiadiazinyl, preparation of, as antibacterials)

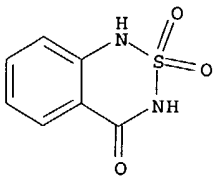
IT **66785-42-0**
RL: PROC (Process)
(conversion of, to potassium salt)

RN 66785-42-0 HCAPLUS

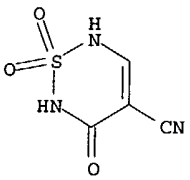
CN 2H-1,2,6-Thiadiazine-4-carbonitrile, 3,6-dihydro-3-oxo-, 1,1-dioxide (9CI) (CA INDEX NAME)



IT **2225-37-8P 66785-49-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with (iodomethyl)thiaazabicyclooctenecarboxylate derivative)
RN 2225-37-8 HCAPLUS
CN 1H-2,1,3-Benzothiadiazin-4(3H)-one, 2,2-dioxide (7CI, 8CI, 9CI) (CA INDEX NAME)



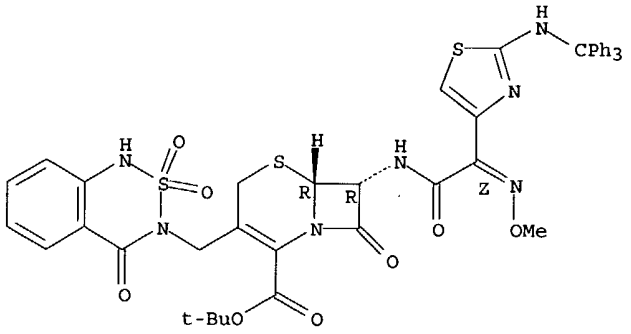
RN 66785-49-7 HCAPLUS
CN 2H-1,2,6-Thiadiazine-4-carbonitrile, 3,6-dihydro-3-oxo-, 1,1-dioxide, monopotassium salt (9CI) (CA INDEX NAME)



● K

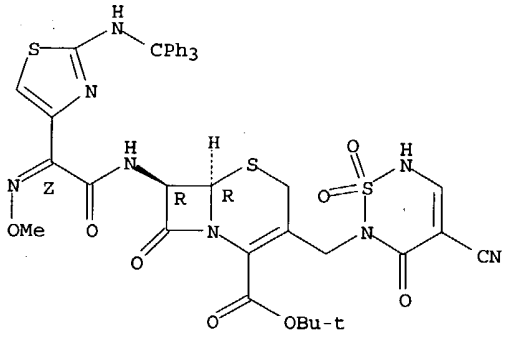
IT **104862-72-8P 115166-54-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deprotection of)
RN 104862-72-8 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(1,4-dihydro-2,2-dioxido-4-oxo-3H-2,1,3-benzothiadiazin-3-yl)methyl]-7-[[(methoxyimino)[2-[(triphenylmethyl)amino]-4-thiazolyl]acetyl]amino]-8-oxo-, 1,1-dimethylethyl ester, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



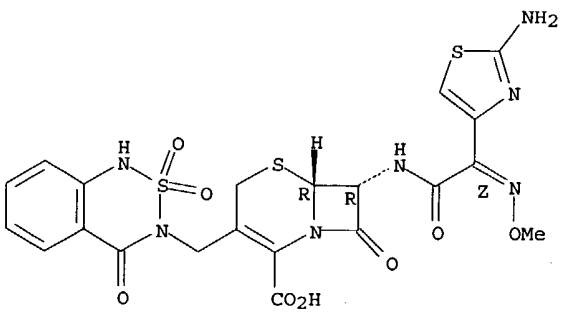
RN 115166-54-6 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(4-cyano-3,6-dihydro-1,1-dioxido-3-oxo-2H-1,2,6-thiadiazin-2-yl)methyl]-7-[[(methoxyimino)[2-[(triphenylmethyl)amino]-4-thiazolyl]acetyl]amino]-8-oxo-, 1,1-dimethylethyl ester, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



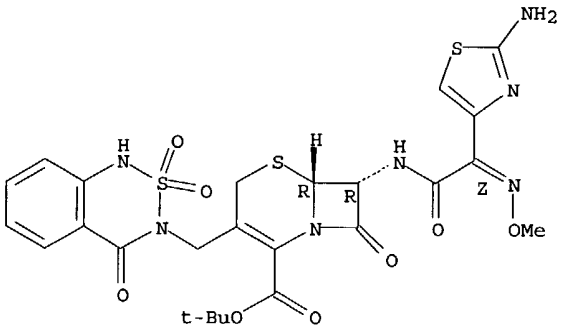
IT **104862-66-0P 104862-67-1P 115151-48-9P**
115151-49-0P 115151-50-3P 115166-55-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as antibacterial)
RN 104862-66-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(1,4-dihydro-2,2-dioxido-4-oxo-3H-2,1,3-benzothiadiazin-3-yl)methyl]-8-oxo-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



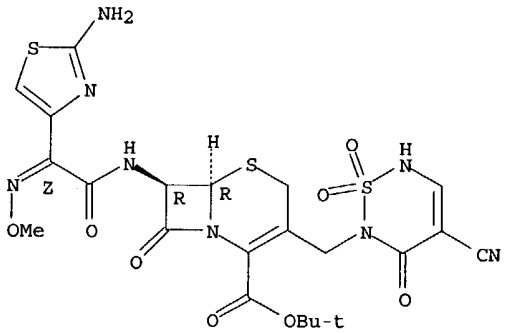
RN 104862-67-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(1,4-dihydro-2,2-dioxido-4-oxo-3H-2,1,3-benzothiadiazin-3-yl)methyl]-8-oxo-, 1,1-dimethylethyl ester, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 115151-48-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(4-cyano-3,6-dihydro-1,1-dioxido-3-oxo-2H-1,2,6-thiadiazin-2-yl)methyl]-8-oxo-, 1,1-dimethylethyl ester, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

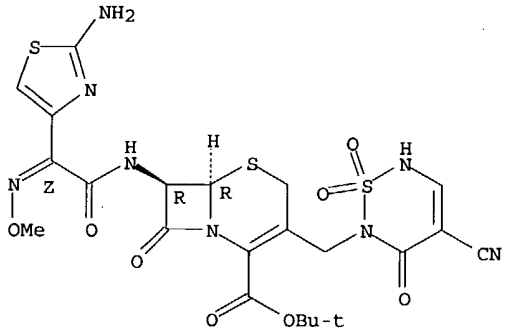


RN 115151-49-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(4-cyano-3,6-dihydro-1,1-dioxido-3-oxo-2H-1,2,6-thiadiazin-2-yl)methyl]-8-oxo-, 1,1-dimethylethyl ester, [6R-[6.alpha.,7.beta.(Z)]]-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

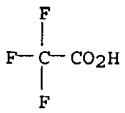
CRN 115151-48-9
CMF **C22 H24 N8 O8 S3**

Absolute stereochemistry.
Double bond geometry as shown.



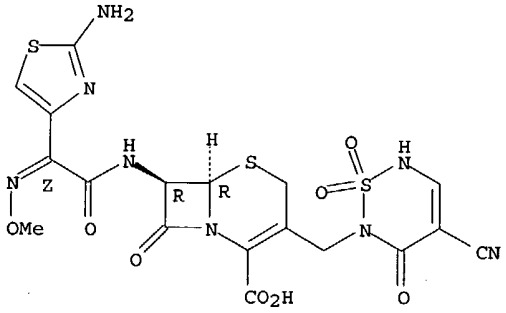
CM 2

CRN 76-05-1
CMF **C2 H F3 O2**



RN 115151-50-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(4-cyano-3,6-dihydro-1,1-dioxido-3-oxo-2H-1,2,6-thiadiazin-2-yl)methyl]-8-oxo-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

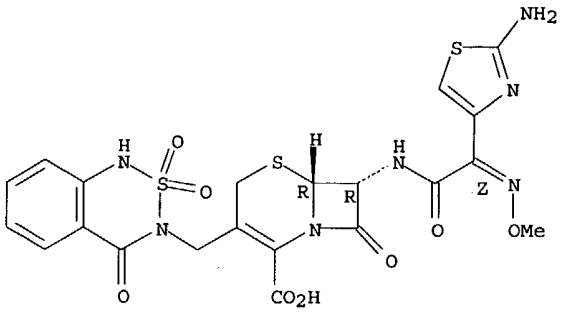


RN 115166-55-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[(1,4-dihydro-2,2-dioxido-4-oxo-3H-2,1,3-benzothiadiazin-3-yl)methyl]-8-oxo-, [6R-[6.alpha.,7.beta.(Z)]]-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

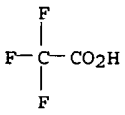
CRN 104862-66-0
CMF **C21 H19 N7 O8 S3**

Absolute stereochemistry.
Double bond geometry as shown.



CM 2

CRN 76-05-1
CMF **C2 H F3 O2**



L26 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:423172 HCAPLUS
DN 107:23172
ED Entered STN: 25 Jul 1987
TI 2-Alkylthiopenem derivatives
IN Hamanaka, Ernest S.
PA Pfizer Inc., USA
SO U.S., 22 pp. Cont.-in-part of U.S. Ser. No. 610,916, abandoned.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM C07D499-00
ICS A61K031-425
NCL 514195000
CC 26-5 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4619924	A	19861028	US 1984-675258	19841127 <--
	ES 533533	A1	19860901	ES 1984-533533	19840619 <--
	IL 72157	A1	19880429	IL 1984-72157	19840619 <--
	CA 1246546	A1	19881213	CA 1984-456950	19840619 <--
	FI 8402496	A	19841222	FI 1984-2496	19840620 <--
	FI 81584	B	19900731		
	FI 81584	C	19901112		
	NO 8402480	A	19841227	NO 1984-2480	19840620 <--
	NO 165399	B	19901029		
	NO 165399	C	19910206		
	AU 8429534	A1	19850103	AU 1984-29534	19840620 <--
	AU 548624	B2	19851219		
	DK 8403009	A	19850205	DK 1984-3009	19840620 <--
	DK 168440	B1	19940328		
	ZA 8404658	A	19860226	ZA 1984-4658	19840620 <--
	HU 37798	A2	19860228	HU 1984-2383	19840620 <--
	HU 194568	B	19880229		
	CS 245794	B2	19861016	CS 1984-4696	19840620 <--
	SU 1287754	A3	19870130	SU 1984-3754455	19840620 <--
	JP 60016990	A2	19850128	JP 1984-126544	19840621 <--
	JP 05028237	B4	19930423		
	DD 227965	A5	19851002	DD 1984-264393	19840621 <--
PRAI	US 1983-506475		19830621 <--		
	US 1984-610916		19840518 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4619924	ICM	C07D499-00
	ICS	A61K031-425
	NCL	514195000

OS CASREACT 107:23172

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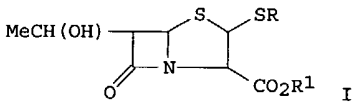

I

AB Title compds. I [R = (methylsulfinyl)- or methylsulfonylalkyl, (un)substituted thianyl, -thiolanyl, substituted thiazinyl, dithiolanyl, etc.; R1 = H, a group which forms an ester which is hydrolyzed in vivo] and their salts, useful as antibacterials (no data), were prepared Thus, (5R,6S)-6R-I [R = (1,1-dioxo-3-thiolanyl); R1 = 4-O2NC6H4CH2] underwent hydrogenolysis in the presence of Pd on diatomaceous earth to give (5R,6S)-6R-I [R = 1,1-dioxo-3-thiolanyl; R1 = Na].

ST penemcarboxylate alkylthio prepn antibacterial; antibacterial alkylthiopenemcarboxylate prepn; heterocyclylthiopenemcarboxylate prepn

IT **Bactericides**, Disinfectants, and Antiseptics
((alkylthio)penemcarboxylates)

IT 107319-16-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with methylsulfinylmethylthioacetate)

IT 107319-09-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with nitrobenzyl oxalyl chloride)

IT 103057-43-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with oxoazetidine derivative)

IT **52513-18-5** 73975-52-7 96864-47-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with penemcarboxylate)

IT 81197-92-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with penemcarboxylate derivative)

IT 54487-02-4 96864-49-2 96864-54-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with thioacetate)

IT 75-08-1, Ethanethiol
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification by, of acetoxyazetidinone derivative)

IT 5912-58-3 6940-49-4 18997-19-8 22072-19-1 29683-23-6 50893-36-2 86063-64-1 107319-08-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification by, of penemcarboxylate)

IT 3334-05-2, Tetrahydrothiophen-3-ol 22072-19-1, Tetrahydrothiopyran-3-ol
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of)

IT 96896-70-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrogenolysis of)

IT 38634-59-2 107319-10-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of)

IT 3334-01-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation of, with penemcarboxylate derivative)

IT 27999-97-9P 32358-85-3P 73975-52-7P 89986-83-4P 96864-32-3P 96864-33-4P 96864-34-5P 96864-35-6P **96864-36-7P** 96864-37-8P **96864-38-9P** 96864-39-0P 96864-40-3P 96864-41-4P 96864-43-6P 96864-44-7P 96864-45-8P 96864-48-1P 96864-53-8P 96864-55-0P 107319-03-9P 107319-04-0P 107319-07-3P 107319-08-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with penemcarboxylate)

IT **96864-87-8P 96896-66-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with penemcarboxylate derivative)

IT 96864-82-3P 96864-84-5P **96864-86-7P** 96896-51-4P
96896-55-8P 96896-56-9P 96896-57-0P **96896-65-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and desilylation of)

IT 96864-83-4P 96864-85-6P 96864-92-5P 96865-13-3P 96865-14-4P
96865-15-5P 96865-16-6P 96896-52-5P 96896-58-1P 96896-59-2P
96896-60-5P **107318-86-5P** 107318-95-6P 107319-05-1P
107319-06-2P 107319-11-9P **107319-12-0P** 107319-13-1P
107319-14-2P **107319-15-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)

IT 96855-24-2P 96864-90-3P 96864-91-4P 96864-93-6P 107318-88-7P
107318-89-8P 107318-90-1P 107318-91-2P 107318-92-3P
107318-93-4P 107318-94-5P 107318-96-7P 107318-97-8P
107318-98-9P 107318-99-0P 107319-00-6P **107319-01-7P**
107319-02-8P 110172-47-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 96864-56-1P 96864-57-2P 96864-58-3P 96864-59-4P **96864-67-4P**
96896-53-6P 96896-54-7P 96896-61-6P 96896-62-7P 96896-63-8P
96896-67-2P 96896-68-3P 107318-78-5P
107318-79-6P 107318-80-9P 107318-81-0P 107318-82-1P 107318-83-2P
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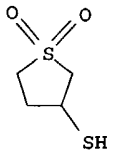
107492-86-4P 107493-66-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as antibacterial)

IT 96855-21-9P 107382-59-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as antibacterial intermediate)

IT 69126-94-9DP, 2-Penem-3-carboxylic acid, alkylthio derivs.
RL: PREP (Preparation)
(preparation of, as antibacterials)

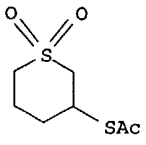
IT **52513-18-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with penemcarboxylate)

RN 52513-18-5 HCAPLUS
CN 3-Thiophenethiol, tetrahydro-, 1,1-dioxide (9CI) (CA INDEX NAME)

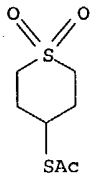


IT **96864-36-7P 96864-38-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with penemcarboxylate)

RN 96864-36-7 HCAPLUS
CN Ethanethioic acid, S-(tetrahydro-1,1-dioxido-2H-thiopyran-3-yl) ester (9CI) (CA INDEX NAME)

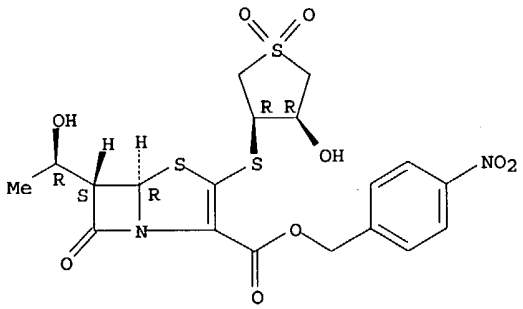


RN 96864-38-9 HCAPLUS
CN Ethanethioic acid, S-(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl) ester (9CI) (CA INDEX NAME)



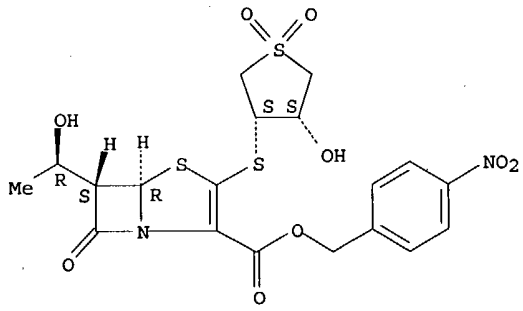
IT **96864-87-8P 96896-66-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation with penemcarboxylate derivative)
RN 96864-87-8 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-4-hydroxy-1,1-dioxido-3-thienyl)thio]-, (4-nitrophenyl)methyl ester, [5R-[3(3R*,4R*),5.alpha.,6.alpha.(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



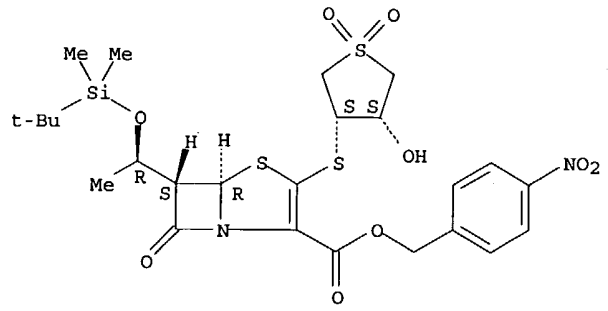
RN 96896-66-1 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-4-hydroxy-1,1-dioxido-3-thienyl)thio]-, (4-nitrophenyl)methyl ester, [5R-[3(3S*,4S*),5.alpha.,6.alpha.(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



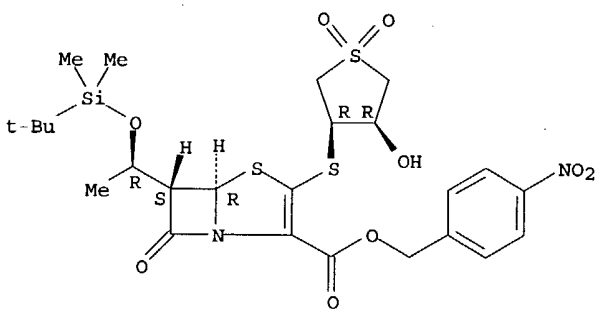
IT **96864-86-7P 96896-65-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and desilylation of)
RN 96864-86-7 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]-7-oxo-3-[(tetrahydro-4-hydroxy-1,1-dioxido-3-thienyl)thio]-, (4-nitrophenyl)methyl ester, [5R-[3(3S*,4S*),5.alpha.,6.alpha.(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

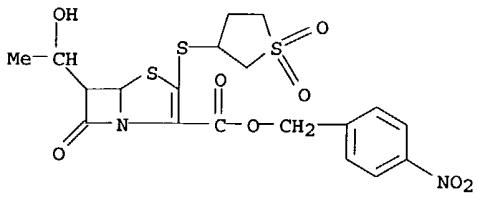


RN 96896-65-0 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]-7-oxo-3-[(tetrahydro-4-hydroxy-1,1-dioxido-3-thienyl)thio]-, (4-nitrophenyl)methyl ester, [5R-[3(3R*,4R*),5.alpha.,6.alpha.(R*)]]- (9CI) (CA INDEX NAME)

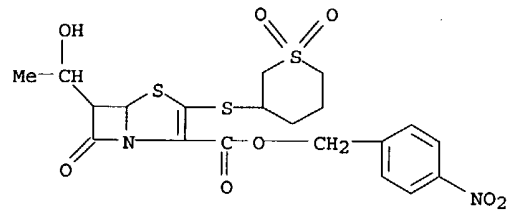
Absolute stereochemistry.



IT **107318-86-5P 107319-12-0P 107319-15-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)
RN 107318-86-5 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-1,1-dioxido-3-thienyl)thio]-, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



RN 107319-12-0 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-1,1-dioxido-2H-thiopyran-3-yl)thio]-, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



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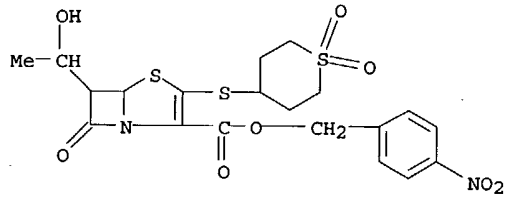
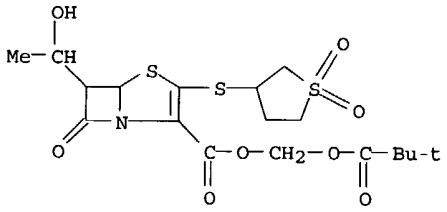
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)thio]-, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



IT **107318-93-4P 107318-98-9P 107319-01-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 107318-93-4 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-1,1-dioxido-3-thienyl)thio]-, (2,2-dimethyl-1-oxopropoxy)methyl ester (9CI) (CA INDEX NAME)



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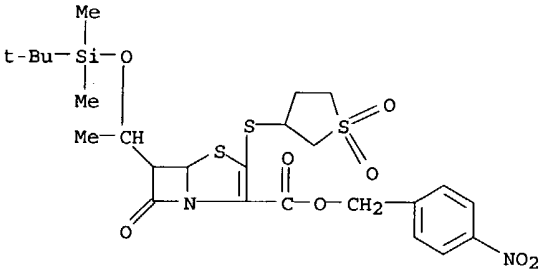
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]-7-oxo-3-[(tetrahydro-1,1-dioxido-3-thienyl)thio]-, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



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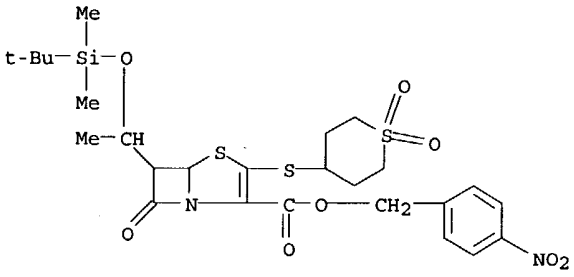
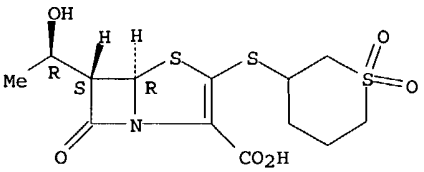
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]-7-oxo-3-[(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)thio]-, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



IT **96864-67-4P 96896-67-2P 96896-68-3P**
107318-78-5P 107318-84-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as antibacterial)

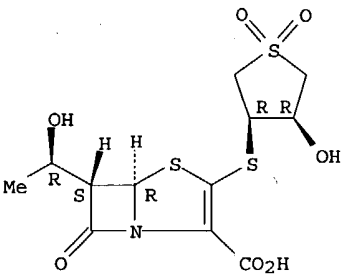
RN 96864-67-4 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-1,1-dioxido-2H-thiopyran-3-yl)thio]-, [5R-[5.alpha.,6.alpha.(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 96896-67-2 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-[(tetrahydro-4-hydroxy-1,1-dioxido-3-thienyl)thio]-, monosodium salt, [5R-[3(3R*,4R*),5.alpha.,6.alpha.(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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RN 96896-68-3 HCAPLUS
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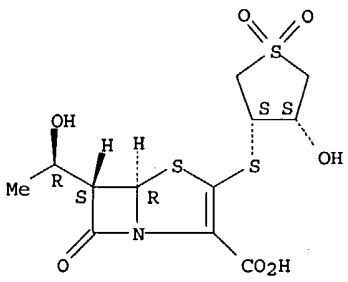
Absolute stereochemistry.



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RN 107318-78-5 HCAPLUS
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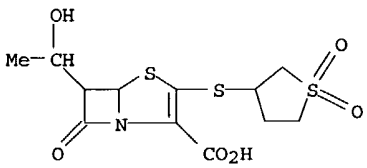

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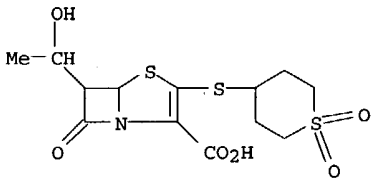

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L26 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:487922 HCAPLUS
DN 99:87922
ED Entered STN: 12 May 1984
TI 7-Aminothiadiazole oxyimino derivatives of cephem and cepham compounds
IN Teraji, Tsutomu; Sakane, Kazuo; Goto, Jiro
PA Fujisawa Pharmaceutical Co., Ltd. , Japan
SO U.S., 74 pp. Cont.-in-part of U.S. 4,331,665.
CODEN: USXXAM
DT **Patent**
LA English
IC A61K031-545
NCL 424246000
CC 26-5 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1
FAN.CNT 15

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PI	US 4381299	A	19830426	US 1980-160904	19800618	<--
	US 4332798	A	19820601	US 1980-116984	19800130	<--
	US 4331665	A	19820525	US 1980-128260	19800307	<--

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EP 27599	B1	19841003			
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ES 505497	A1	19830101	ES 1981-505497	19810915	<--
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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	NCL	424246000

OS CASREACT 99:87922

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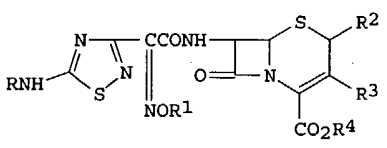

I

AB Cephalosporins I [R,R4 = H, protective group; R1 = H, carbamoyl, acyl, substituted sulfonyl, (un)substituted alkyl, aryl, cycloalkyl, heterocyclic; R2 = H, alkyl; R3 = H, (un)substituted alkyl, OH, halo] (>200 compds.) were prepared Thus, I (R = R2 = R4 = H, R1 = 4-ClC6H4, R3 = 1,3,4-thiadiazol-2-ylthiomethyl), prepared by acylating the corresponding aminocephem, had min. inhibitory concentration against Pseudomonas aeruginosa of 3.13 ng/mL.

ST aminothiadiazolylacetamidocephem prepn bactericide; cephem aminothiadiazolylacetamido prepn bactericide

IT **Bactericides**, Disinfectants, and Antiseptics
(aminothiadiazolylacetamido cephems)

IT 24209-43-6 36923-17-8 52727-68-1 68180-69-8 96752-43-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of)

IT 37632-00-1 76029-93-1 76029-95-3 76038-91-0 86647-64-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of aminocephems by)

IT 76029-01-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(butoxycarbonylation of)

IT 86647-74-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(deacylation of)

IT 76027-86-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydration of)

IT 5251-81-0 76029-67-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrazinolysis of)

IT 78931-05-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of)

IT 76038-46-5P 86647-75-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acylation of)

IT 76029-53-3P 76029-54-4P 76029-55-5P 76029-80-6P 76029-83-9P
76029-84-0P 76029-91-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acylation of aminocephems by)

IT 76028-10-9P 76029-94-2P 76038-33-0P 76038-55-6P 76038-56-7P
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78931-29-0P 78931-35-8P 81660-78-8P 81672-30-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and bactericidal activity of)

IT 74651-82-4P
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(preparation and deacetylation of)

IT 76027-36-6P 76027-96-8P 76030-22-3P 76038-18-1P 76038-25-0P
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83023-28-3P
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(preparation and deblocking of)

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(preparation and esterification of)

IT 623-49-4P
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(preparation and ethanolysis of)

IT 75028-16-9P
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(Reactant or reagent)
(preparation and formylation of)
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
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(preparation and reaction of, with acetoxymethylcephems)
IT 816-27-3P
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(preparation and reaction of, with ammonia)
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IT 4572-03-6P
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(preparation and reaction of, with isonicotinamide)
IT 75028-17-0P
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IT 78931-07-4P
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76038-31-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 76038-32-9P 76038-34-1P 76038-35-2P 76038-36-3P 76038-37-4P
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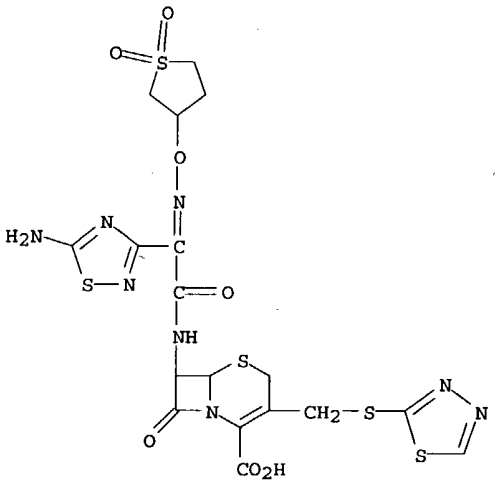
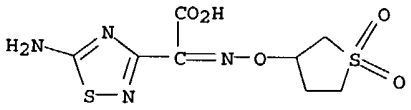
86647-71-4P 86647-72-5P 86647-73-6P 86647-76-9P 86647-77-0P
86647-78-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 38945-21-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Me thiomethyl sulfinylacetylthiadiazole)
IT 100-55-0 1453-82-3 7624-33-1 23439-80-7 56610-85-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acetoxymethylcephems)
IT 76027-37-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with allyltetrazolethiol)
IT 75-15-0, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with aminopropylmorpholine and Me iodide)
IT 524-38-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bromocyclohexene)
IT 109-01-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bromopropylphthalimide)
IT 123-00-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with carbon disulfide and Me iodide)
IT 4078-13-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with carbondisulfide)
IT 75028-19-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cyclohexenyloxyamine)
IT 33577-16-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with formamidothiadiazolcarboxylate)
IT 76029-50-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with formamidothiadiazolglyoxylate)
IT 96-40-2 1521-51-3 2404-35-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxyphthalimide)
IT 5460-29-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methylpiperazine)
IT **76027-56-0P 76028-91-6P 76028-99-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 76027-56-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(5-amino-1,2,4-thiadiazol-3-yl)[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]acetyl]amino]-8-oxo-3-[(1,3,4-thiadiazol-2-ylthio)methyl]-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)



RN 76028-91-6 HCAPLUS
CN 1,2,4-Thiadiazole-3-acetic acid, 5-amino-.alpha.-[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]-, (Z)- (9CI) (CA INDEX NAME)



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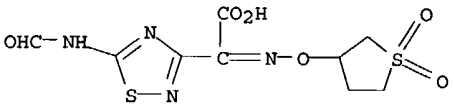
CN 1,2,4-Thiadiazole-3-acetic acid, 5-(formylamino)-.alpha.-[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]-, (Z)- (9CI) (CA INDEX NAME)



L26 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:4433 HCAPLUS
DN 98:4433
ED Entered STN: 12 May 1984
TI 7-Aminothiadiazole hydroxyimino derivatives of cephem and cephem compounds
IN Teraji, Tsutomu; Sakane, Kazuo; Goto, Jiro
PA Fujisawa Pharmaceutical Co., Ltd. , Japan
SO U.S., 67 pp. Cont.-in-part of U.S. Ser. No. 108,161, abandoned.
CODEN: USXXAM
DT **Patent**
LA English
IC A61K031-545; C07D501-56
NCL 424246000
CC 26-5 (Biomolecules and Their Synthetic Analogs)
FAN.CNT 15

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PI	US 4332798	A	19820601	US 1980-116984	19800130 <--
	AT 8396	E	19840715	AT 1981-102352	19790702 <--
	DK 7905542	A	19800630	DK 1979-5542	19791221 <--
	HU 26363	O	19830928	HU 1979-FU382	19791228 <--
	HU 183006	B	19840428		
	AT 16931	E	19851215	AT 1982-100599	19791228 <--
	US 4331665	A	19820525	US 1980-128260	19800307 <--
	US 4381299	A	19830426	US 1980-160904	19800618 <--
	US 4338313	A	19820706	US 1980-180295	19800822 <--
	AU 8063105	A1	19810416	AU 1980-63105	19801009 <--
	AU 540237	B2	19841108		
	US 4447429	A	19840508	US 1980-213351	19801205 <--
	US 4390534	A	19830628	US 1981-255301	19810417 <--
	ES 505496	A1	19820716	ES 1981-505496	19810915 <--
	US 4425340	A	19840110	US 1981-314045	19811022 <--
	US 4468515	A	19840828	US 1981-325027	19811125 <--
	CA 1175843	A2	19841009	CA 1983-438260	19831003 <--
	CA 1182460	A2	19850212	CA 1983-438571	19831006 <--
	US 4585872	A	19860429	US 1984-571380	19840116 <--
	US 4567275	A	19860128	US 1984-619981	19840612 <--
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	GB 1979-35538		19791012 <--		
	DK 1979-5542		19791221 <--		
	US 1979-108161		19791228 <--		
	GB 1978-29357		19780710 <--		
	US 1979-50216		19790620 <--		
	CA 1979-331128		19790704 <--		
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	EP 1982-100599		19791228 <--		
	US 1980-116984		19800130 <--		
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	US 1980-213351		19801205 <--		
	EP 1981-102352		19810328 <--		
	US 1981-255301		19810417 <--		
	US 1981-325027		19811125 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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	NCL	424246000

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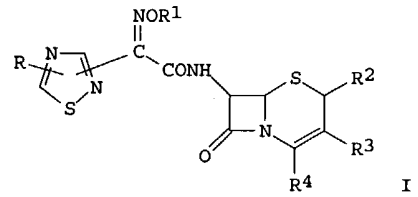
GI



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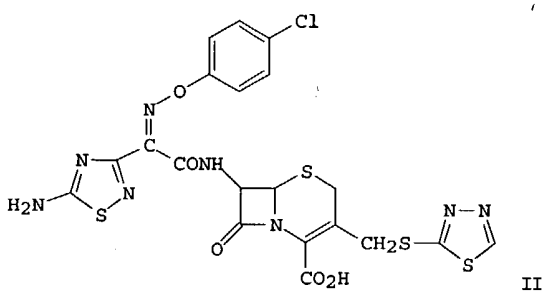

II

AB Bactericidal thiadiazolyl(hydroxyimino)acetamidocephems I [R = H2N, protected H2N; R1 = H, acyl, sulfonyl, aryl, alkylaryl, alkyl, substituted alkyl, alkenyl, alkynyl, heterocyclyl; R2 = H, alkyl; R3 = H, acyloxyalkyl, pyridiniumalkyl, carbamoylpyridiniumalkyl, heterocyclylthioalkyl, alkyl, halo, HO; R4 = CO2H, protected CO2H] and dihydro derivs. of I were prepared Thus, 2-(4-chlorophenoxyimino)-2-(5-amino-1,2,4-thiadiazol-3-yl)acetic acid was treated with PCl5 in CH2Cl2 and then condensed with silylated 7-amino-3-(1,3,4-thiadiazol-2-yl)thiomethyl-3-cephem-4-carboxylic acid to give the cephem II. The min. inhibitory concentration of II against E. coli was 0.20 .mu.g/mL.

ST aminothiadiazolylhydroxyimino cephem bactericide; thiadiazolylhydroxyimino cephem bactericide

IT **Bactericides**, Disinfectants, and Antiseptics
((aminothiadiazolyl)(hydroxyimino)cephems)

IT 79-36-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation by, of (hydroxyimino)acetic acid derivs.)

IT 37632-00-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation by, of aminopropoxyimino cephem derivs.)

IT 76038-46-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of, by aminocyclohexylacetyl chloride)

IT 76029-01-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with aminopropoxyimino cephem derivative)

IT 58632-95-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with (aminopropyl)tetrazole derivs.)

IT 1828-09-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with (hydroxyimino)thiadiazolylacetic acid derivative)

IT 76028-95-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with aminocephem derivs.)

IT 4078-13-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with carbon disulfide)

IT 123-00-2 3529-08-6
RL: RCT (Reactant); RACT (Reactant or reagent)

(condensation reaction of, with carbon disulfide and Me iodide)
IT 1453-82-3 23439-80-7 56610-85-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with cephalosporanic acid derivative)
IT 7624-33-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with cephalosporanic acid derivs.)
IT 75-15-0, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with piperazinylpropylamine)
IT 76027-37-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with tetrazole derivative)
IT 36923-17-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with thiadiazolylacetic acid derivative)
IT 24209-43-6 52727-68-1 68180-69-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with thiadiazolylacetic acid derivs.)
IT 76029-20-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with thiadiazolylthioglyoxylate derivative)
IT 333-20-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, with (methoxycarbonyl)formamidine)
IT 5251-81-0 76029-67-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrazinolysis of)
IT 76029-50-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oximation by, of thiadiazolylglyoxylate derivs.)
IT 38945-21-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oximation by, of thiadiazolylthioglyoxylate derivs.)
IT 76029-46-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(oximation of, by (cycloalkyloxy)amines)
IT 816-27-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and amination of)
IT 76028-10-9P 76029-94-2P 76038-33-0P 76038-51-2P 76038-55-6P
76038-56-7P 76038-57-8P 76038-59-0P 76038-75-0P 76038-78-3P
76038-83-0P 76069-17-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and bactericidal activity of)
IT 75028-29-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and butoxycarbonylation of)
IT 76029-87-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation of, with aminocephemcarboxylates)
IT 76029-53-3P 76029-54-4P 76029-93-1P 76029-95-3P 76038-91-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with aminocephem derivs.)
IT 4572-03-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with carbon disulfide and Me iodide)
IT 76038-74-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with isonicotinamide)
IT 74652-11-2P 76027-63-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with tetrazole derivs.)
IT 76030-01-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with tetrazolopyridazine derivative)
IT 76029-21-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation reaction of)

IT 60189-97-1P 76029-62-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation reaction of, with potassium thiocyanate)

IT 74651-81-3P 76029-30-6P 76029-57-7P 76029-59-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation reaction of, with sodium azide)

IT 74651-82-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deacetylation of)

IT 76027-96-8P 76028-47-2P 76036-03-8P 83023-29-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of)

IT 76029-47-5P 76029-49-7P 76029-51-1P 76029-52-2P 76029-63-5P
76029-64-6P 76029-65-7P 76029-66-8P 76029-69-1P 76029-70-4P
76029-71-5P 76029-72-6P 76029-73-7P 76029-74-8P 76029-92-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deformylation of)

IT 76027-86-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and dehydration of)

IT 76027-36-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and detritylation of)

IT 623-49-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and ethanolysis of)

IT 75028-16-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and formylation of)

IT 6820-96-8P 76029-42-0P 76029-43-1P 76029-44-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrazinolysis of)

IT 78931-05-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 74651-80-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methylation of)

IT 75028-18-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and oxidation-oximation reactions of)

IT 76029-45-3P 76029-48-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oximation by, of thiadiazolylglyoxylate derivative)

IT 5740-47-6P 76029-68-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oximation by, of thiadiazolylthioglyoxylate derivs.)

IT 75028-19-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oximation of, by (cycloalkyloxy)amines)

IT 75028-17-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and substitution reaction of, with Me methylthio sulfoxide)

IT 76029-09-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tritylation of)

IT 50848-00-5P 62803-51-4P 66340-70-3P 74651-79-9P 76027-34-4P
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RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 76038-20-5P 76038-21-6P 76038-22-7P 76038-23-8P 76038-24-9P
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83023-23-8P 83023-25-0P 83023-26-1P 83023-27-2P 83023-28-3P
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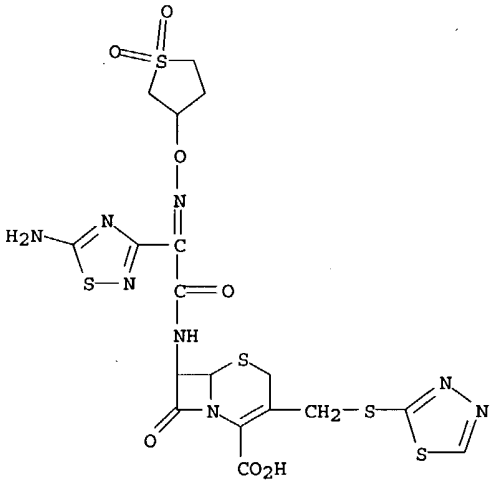
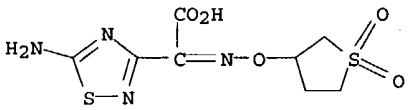
83031-72-5P 83031-78-1P 83031-79-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 95-50-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with potassium iodate)

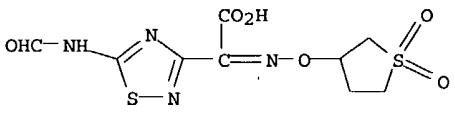
IT 109-01-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with (bromopropyl)phthalimide)
IT 53064-79-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with cephemcarboxylic acid derivative)
IT 96-40-2 1521-51-3 2404-35-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with hydroxyphthalimide)
IT 5460-29-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with methylpiperazine)
IT 33577-16-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with thiadiazole carboxylate derivs.)
IT 524-38-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reactions of, with halocycloalkenes)
IT **76027-56-0P 76028-91-6P 76028-99-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 76027-56-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(5-amino-1,2,4-thiadiazol-3-yl)[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]acetyl]amino]-8-oxo-3-[(1,3,4-thiadiazol-2-ylthio)methyl]-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)



RN 76028-91-6 HCAPLUS
CN 1,2,4-Thiadiazole-3-acetic acid, 5-amino-.alpha.-[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]-, (Z)- (9CI) (CA INDEX NAME)



RN 76028-99-4 HCAPLUS
CN 1,2,4-Thiadiazole-3-acetic acid, 5-(formylamino)-.alpha.-[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]-, (Z)- (9CI) (CA INDEX NAME)



L26 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:4432 HCAPLUS
DN 98:4432
ED Entered STN: 12 May 1984
TI Cephem and cepham compounds
IN Teraji, Tsutomu; Sakane, Kazuo; Goto, Jiro
PA Fujisawa Pharmaceutical Co., Ltd. , Japan
SO U.S., 69 pp. Cont.-in-part of U.S. Ser. No. 116,984.
CODEN: USXXAM
DT **Patent**
LA English
IC A61K031-545
NCL 424246000
CC 26-5 (Biomolecules and Their Synthetic Analogs)
FAN.CNT 15

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4331665	A	19820525	US 1980-128260	19800307 <--
	AT 8396	E	19840715	AT 1981-102352	19790702 <--
	HU 26363	O	19830928	HU 1979-FU382	19791228 <--
	HU 183006	B	19840428		
	AT 16931	E	19851215	AT 1982-100599	19791228 <--
	US 4332798	A	19820601	US 1980-116984	19800130 <--
	US 4381299	A	19830426	US 1980-160904	19800618 <--
	US 4338313	A	19820706	US 1980-180295	19800822 <--
	EP 27599	A2	19810429	EP 1980-106112	19801008 <--
	EP 27599	A3	19810715		
	EP 27599	B1	19841003		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AT 9699	E	19841015	AT 1980-106112	19801008 <--
	CA 1215969	A1	19861230	CA 1980-361999	19801008 <--
	AU 8063105	A1	19810416	AU 1980-63105	19801009 <--
	AU 540237	B2	19841108		
	JP 57112396	A2	19820713	JP 1980-141581	19801009 <--
	JP 02040679	B4	19900912		
	DK 8004314	A	19810413	DK 1980-4314	19801010 <--
	ES 495795	A1	19820201	ES 1980-495795	19801010 <--
	US 4447429	A	19840508	US 1980-213351	19801205 <--
	FI 8100652	A	19810908	FI 1981-652	19810302 <--
	CS 228145	B2	19840514	CS 1981-1520	19810303 <--
	CS 228149	B2	19840514	CS 1981-9333	19810303 <--
	NO 8100767	A	19810908	NO 1981-767	19810305 <--
	DD 157802	C	19821208	DD 1981-228112	19810306 <--
	US 4390534	A	19830628	US 1981-255301	19810417 <--
	ES 505496	A1	19820716	ES 1981-505496	19810915 <--
	ES 505494	A1	19820916	ES 1981-505494	19810915 <--
	ES 505495	A1	19821001	ES 1981-505495	19810915 <--
	ES 505497	A1	19830101	ES 1981-505497	19810915 <--
	US 4425340	A	19840110	US 1981-314045	19811022 <--
	CA 1175843	A2	19841009	CA 1983-438260	19831003 <--
	CA 1182460	A2	19850212	CA 1983-438571	19831006 <--
	US 4585872	A	19860429	US 1984-571380	19840116 <--
	JP 01193272	A2	19890803	JP 1988-306635	19881202 <--
	JP 01193271	A2	19890803	JP 1988-306636	19881202 <--
	JP 03068036	B4	19911025		
	JP 01193273	A2	19890803	JP 1988-306637	19881202 <--
	JP 03068037	B4	19911025		

PRAI	GB 1978-50334	19781229	<--
	GB 1979-35538	19791012	<--
	US 1979-108161	19791228	<--
	US 1980-116984	19800130	<--
	GB 1978-29357	19780710	<--
	US 1979-50216	19790620	<--
	CA 1979-331128	19790704	<--
	DK 1979-5542	19791221	<--
	CA 1979-342801	19791228	<--
	EP 1982-100599	19791228	<--
	US 1980-128260	19800307	<--
	US 1980-160904	19800618	<--
	US 1980-180295	19800822	<--
	ZA 1980-6068	19801001	<--
	EP 1980-106112	19801008	<--
	US 1980-213351	19801205	<--
	US 1980-214785	19801209	<--
	EP 1981-102352	19810328	<--
	US 1981-255301	19810417	<--

CLASS PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4331665	IC	A61K031-545
	NCL	424246000

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Bactericidal thiadiazolyl(hydroxyimino)acetamidocephems I [R = H2N, protected H2N; R1 = cycloalkyl, cycloalkenyl, (un)protected carboxyalkyl; R2 = pyridiniumalkyl, carbamoylpyridinioalkyl, thiadiazolylthioalkyl, tetrazolylthioalkyl; R3 = (un)protected CO2H] were prepared Thus, treating (aminothiadiazolyl)acetic acid II with PCl5 in CH2Cl2 and then with cephemylmethylpyridiniumcarboxylate III gave cephem IV, which had a min. inhibitory concentration of 1.56 .mu.g/mL against E. coli.

ST thiadiazolylacetamidocephemylmethylpyridinium prepn bactericide; cephemylmethylpyridinium prepn bactericide; pyridinium cephemylmethyl prepn bactericide

IT **Bactericides**, Disinfectants, and Antiseptics
((thidiazolylacetamido)cephemylmethylpyridinium derivs.)

IT 79-36-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation by, of (hydroxyimino)acetic acid derivs.)

IT 37632-00-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation by, of aminopropoxyimino cephem derivs.)

IT 76038-46-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of, by aminocyclohexylacetyl chloride)

IT 76029-01-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with aminopropoxyimino cephem derivs.)

IT 58632-95-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with (aminopropyl)tetrazole derivative)

IT 96752-43-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with (aminothiadiazolyl)acetic acid derivs.)

IT 1828-09-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with (hydroxyimino)thiadiazolylacetic acids)

IT 76028-95-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with aminocephem derivs.)

IT 4078-13-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with carbon disulfide)

IT 123-00-2 3529-08-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with carbon disulfide and Me iodide)

IT 1453-82-3 7624-33-1 23439-80-7 56610-85-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with cephalosporanic acid derivs.)

IT 75-15-0, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with piperazinylpropylamine)

IT 36923-17-8 52727-68-1 68180-69-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with thiadiazolylacetic acid derivs.)

IT 76029-20-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with thiadiazolylthioglyoxylate derivs.)

IT 24209-43-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reactions of, with thiadiazolylacetic acid derivs.)

IT 333-20-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation reaction of, with (methoxycarbonyl)formamidine)

IT 5251-81-0 76029-67-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrazinolysis of)

IT 76029-50-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(oximation by, of thiadiazolylglyoxylate derivs.)
IT 38945-21-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oximation by, of thiadiazolylthioglyoxylate derivs.)
IT 76029-46-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(oximation of, by (cycloalkyloxy)amines)
IT 816-27-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and amination of)
IT 76028-10-9P 76029-94-2P 76038-33-0P 76038-51-2P 76038-55-6P
76038-56-7P 76038-57-8P 76038-59-0P 76038-78-3P 76038-83-0P
76069-17-5P 78931-29-0P 78931-35-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and bactericidal activity of)
IT 75028-29-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and butoxycarbonylation of)
IT 76029-53-3P 76029-54-4P 76029-87-3P 76029-93-1P 76029-95-3P
76038-91-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with aminocephem derivs.)
IT 4572-03-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with carbon disulfide and Me iodide)
IT 76038-74-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with isonicotinamide)
IT 74652-11-2P 76027-37-7P 76027-63-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with tetrazole derivs.)
IT 76030-01-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and condensation reaction of, with tetrazolopyridazine derivs.)
IT 76029-21-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation reaction of)
IT 60189-97-1P 76029-62-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation reaction of, with potassium thiocyanate)
IT 74651-81-3P 76029-30-6P 76029-57-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation reaction of, with sodium azide)
IT 74651-82-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deacetylation of)
IT 76027-96-8P 76028-47-2P 76036-03-8P 83023-29-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of)
IT 76029-47-5P 76029-49-7P 76029-51-1P 76029-52-2P 76029-63-5P
76029-64-6P 76029-65-7P 76029-66-8P 76029-69-1P 76029-70-4P
76029-71-5P 76029-72-6P 76029-73-7P 76029-74-8P 76029-92-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deformylation of)
IT 76027-86-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and dehydration of)
IT 76027-36-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and detritylation of)

IT 623-49-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and ethanolysis of)

IT 75028-16-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and formylation of)

IT 6820-96-8P 76029-42-0P 76029-43-1P 76029-44-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrazinolysis of)

IT 78931-05-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 74651-80-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methylation of)

IT 75028-18-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and oxidation-oximation reactions of)

IT 76029-45-3P 76029-48-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oximation by, of thiadiazolylglyoxylate derivs.)

IT 5740-47-6P 76029-68-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oximation by, of thiadiazolylthioglyoxylate derivs.)

IT 75028-19-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oximation of, by (cycloalkyloxy)amines)

IT 75028-17-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and substitution reaction of, with Me methylthiomethyl sulfoxide)

IT 76029-09-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tritylation of)

IT 50848-00-5P 62803-51-4P 66340-70-3P 74651-79-9P 76027-34-4P
76027-35-5P 76027-38-8P 76027-39-9P 76027-40-2P 76027-41-3P
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76038-14-7P 76038-15-8P 76038-16-9P 76038-17-0P 76038-18-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

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83031-68-9P 83031-69-0P 83031-70-3P 83031-71-4P 83031-72-5P
83031-73-6P 83031-74-7P 83031-75-8P 83031-76-9P 83031-77-0P
83031-78-1P 83031-79-2P 83134-37-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 95-50-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with potassium iodate)

IT 109-01-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with (bromopropyl)phthalimide)

IT 53064-79-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with cephemcarboxylic acid derivs.)

IT 96-40-2 1521-51-3 2404-35-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with hydroxyphthalimide)

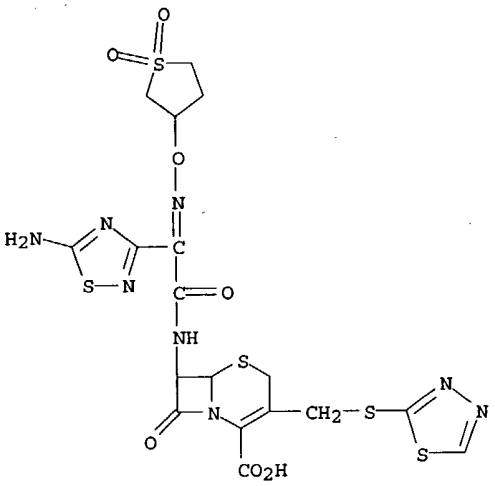
IT 5460-29-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with methylpiperazine)

IT 33577-16-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with thiadiazolecarboxylate derivative)

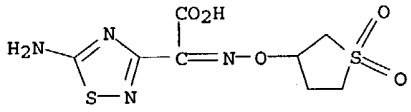
IT 524-38-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reactions of, with halocycloalkenes)

IT **76027-56-0P 76028-91-6P 76028-99-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

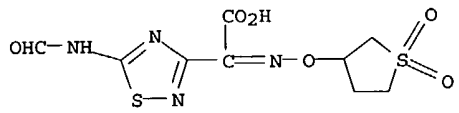
RN 76027-56-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(5-amino-1,2,4-thiadiazol-3-yl)[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]acetyl]amino]-8-oxo-3-[(1,3,4-thiadiazol-2-ylthio)methyl]-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)



RN 76028-91-6 HCAPLUS
CN 1,2,4-Thiadiazole-3-acetic acid, 5-amino-.alpha.-[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]-, (Z)- (9CI) (CA INDEX NAME)



RN 76028-99-4 HCAPLUS
CN 1,2,4-Thiadiazole-3-acetic acid, 5-(formylamino)-.alpha.-[[(tetrahydro-1,1-dioxido-3-thienyl)oxy]imino]-, (Z)- (9CI) (CA INDEX NAME)



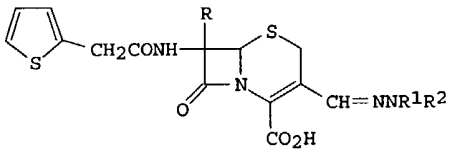
L26 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:23083 HCAPLUS
DN 90:23083
ED Entered STN: 12 May 1984
TI Antibacterial hydrazono cephalosporins
IN Yoshioka, Mitsuru; Sendo, Yuji; Ishikura, Koji; Murakami, Masayuki; Miyazaki, Sadao
PA Shionogi and Co., Ltd., Japan
SO U.S., 8 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC A61K031-545
NCL 424246000
CC 28-15 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4101658	A	19780718	US 1975-583696	19750604 <--
PRAI US 1975-583696		19750604 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4101658	IC	A61K031-545
	NCL	424246000

GI



I

AB Cephalosporin 3-hydrazonomethyl analogs I (R = H, OMe; R = H, alkyl; R1 = H, Ph, substituted-Ph, heteroaryl, acyl), useful as bactericides (no data), were prepared Thus, 3-formyl-7-[(2-thienyl)acetamido]-3-cephem-4-carboxylic acid hemiacetal lactone was treated with N2H4.HCl to give I (R = R1 = R2 = H).

ST cephalosorin hydrazonomethyl analog; hydrazonomethylcephalosporin analog prepn bactericide; cephemcarboxaldehyde hydrazone prepn bactericide

IT **Bactericides**, Disinfectants and Antiseptics
(cephalosporin 3-hydrazonomethyl analogs)

IT 54-85-3 123-46-6 140-87-4 515-96-8 613-94-5 624-84-0 637-80-9 870-46-2 996-98-5 1068-57-1 1126-58-5 1576-35-8 1750-12-5 3326-71-4 **3448-12-2** 3868-12-0 4137-63-7 5397-03-5 5404-86-4 6294-89-9 30216-51-4 53732-02-8 62438-01-1 62438-02-2 62438-03-3 62438-04-4 62438-05-5 64703-15-7 64703-16-8 68696-20-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction with cephalosporin 3-formyl analog)

IT 24589-77-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction with cephalosporin formyl analog)

IT 36114-21-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction with hydrazine derivative)

IT 53493-28-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction with hydrazines, 3-hydrazonomethyl analogs from)

IT 6945-92-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction withcephalosporin 3-formyl analog)

IT 100-63-0 618-40-6 619-67-0 877-66-7 14011-37-1 33906-30-8 52532-33-9 62437-99-4 62438-00-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation with cephalosporin 3-formyl analog)

IT 33741-82-1 49769-49-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation with hydrazine derivative)

IT 56984-21-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation with hydrazine, 3-hydrazonomethyl compound from)

IT 1918-77-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(conversion to acid chloride)

IT 51-28-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of 2-thienylacetic acid by)

IT 64703-17-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of)

IT 62438-17-9P
RL: PREP (Preparation)
(prepare of, and N-acylation of cephalosporin 7-amino 3-formyl analog by)

IT 62438-07-7P **62438-08-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and saponification of)

IT 62438-15-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and N-acylation of, by mixed 2-thienylacetic anhydride)

IT 59774-72-0P 59774-76-4P 59774-77-5P 59774-78-6P 59774-79-7P 59774-80-0P 59774-81-1P 59774-82-2P 59774-83-3P 59774-84-4P 59774-85-5P 59774-86-6P 59774-87-7P 59774-88-8P 59774-89-9P 59774-91-3P 59774-92-4P 59774-93-5P 59774-94-6P 59774-95-7P 59774-96-8P 59774-97-9P 59774-98-0P 59774-99-1P 59775-00-7P 59775-01-8P 59775-02-9P 59775-03-0P 59775-04-1P 59775-05-2P

59775-06-3P 59775-07-4P 59775-09-6P 59775-10-9P
59775-11-0P 59775-12-1P 59775-13-2P 59775-14-3P 62437-98-3P
62438-09-9P 62438-10-2P 62438-11-3P 62438-12-4P 62438-13-5P
62438-19-1P 62532-39-2P 68696-21-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 39098-97-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, and N-acylation of cephalosporin amino formyl analog by)

IT 62438-18-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(N,N-diacylation by phthalimide derivative)

IT 22509-74-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(N,N-diacylation of cephalosporin 7-amino 3-formyl analog by)

IT 62438-22-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-acetylation of cephalosporin 7-amino 3-formyl analog by)

IT 62438-16-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-acylation by 2-thienylacetate ester)

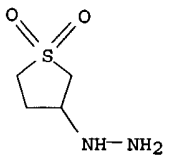
IT 62438-20-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-acylation by 2-thienylacetic acid)

IT 62438-14-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-acylation by 2-thienylacetyl chloride)

IT 62438-21-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(S-oxidation of)

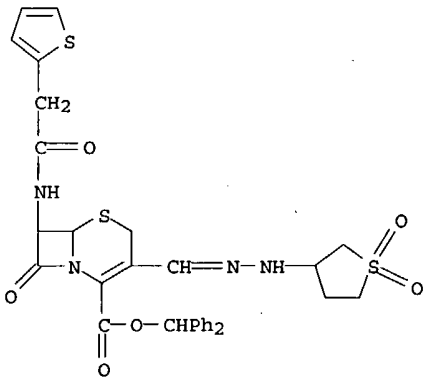
IT **3448-12-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction with cephalosporin 3-formyl analog)

RN 3448-12-2 HCAPLUS
CN Hydrazine, (tetrahydro-1,1-dioxido-3-thienyl)- (9CI) (CA INDEX NAME)

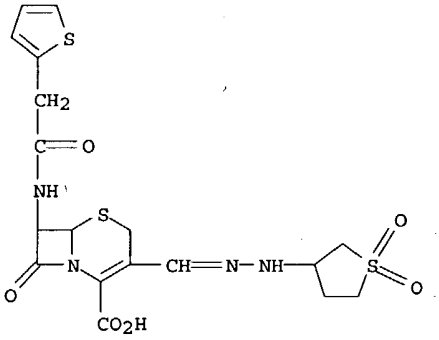


IT **62438-08-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and saponification of)

RN 62438-08-8 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[[(tetrahydro-1,1-dioxido-3-thienyl)hydrazono]methyl]-7-[(2-thienylacetyl)amino]-, diphenylmethyl ester, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)



IT **59775-06-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 59775-06-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[[(tetrahydro-1,1-dioxido-3-thienyl)hydrazono]methyl]-7-[(2-thienylacetyl)amino]-, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)



L26 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1976:100857 HCAPLUS
DN 84:100857
ED Entered STN: 12 May 1984
TI Synergistic compositions containing 2,2-dibromo-3-nitrilopropionamide and 3,3,4,4-tetrachlorotetrahydrothiophene-1,1-dioxide
IN Brink, Robert H., Jr.; Shema, Bernard F.; Swered, Paul
PA Betz Laboratories, Inc., USA
SO U.S., 5 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC A01N; C02B
NCL 210062000
CC 5-2 (Agrochemicals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3928198	A	19751223	US 1975-555776	19750306 <--
PRAI US 1975-555776		19750306 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3928198	IC	A01NIC C02B
	NCL	210062000

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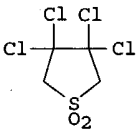


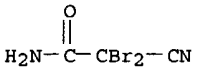
II

AB Compns. containing 2,2-dibromo-3-nitrilopropionamide (I) and 3,3,4,4-tetrachlorotetrahydrothiophene-1,1-dioxide (II) are synergistic bactericides, fungicides and slimicides. Thus a I-II mixture [**58339-15-4**] (1:1) at 100 ppm killed 99% of the microorganisms of a recirculating H2O sample from a paper mill in 3 hr, compared with 82 and 87% kill, resp., for like concns. of pentachlorophenol and Na dimethyldithiocarbamate after 3 hr.
ST thiophene tetrachlorotetrahydro dioxide slimicide; bactericide bromonitrilopropionamide chlorotetrahydrothiophene dioxide; fungicide bromonitrilopropionamide chlorotetrahydrothiophene dioxide; slimicide bromonitrilopropionamide chlorotetrahydrothiophene dioxide
IT Slimes and Sludges

(control of, by dibromonitrilopropionamide mixts. with tetrachloroetetrahydrothiopene dioxide)
IT **Bactericides**, Disinfectants and Antiseptics
Fungicides and Fungistats
(dibromonitrilopropionamide mixts. with tetrachlorotetrahydrothiopene dioxide)
IT Paper
(slime control in manufacture of, by dibromonitrilopropionamide mixts. with tetrachlorotetrahydrothiopene dioxide)
IT **58339-15-4**
RL: BIOL (Biological study)
(bactericide and fungicide and slimicide)
IT **58339-15-4**
RL: BIOL (Biological study)
(bactericide and fungicide and slimicide)
RN 58339-15-4 HCAPLUS
CN Acetamide, 2,2-dibromo-2-cyano-, mixt. with 3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide (9CI) (CA INDEX NAME)

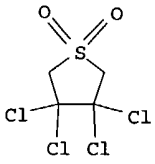
CM 1

CRN 10222-01-2
CMF **C3 H2 Br2 N2 O**



CM 2

CRN 3737-41-5
CMF **C4 H4 Cl4 O2 S**



L26 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1975:559139 HCAPLUS
DN 83:159139
ED Entered STN: 12 May 1984
TI Control of bacteria and fungi in aqueous systems
IN Meyers, William J., Jr.
PA Diamond Shamrock Corp., USA
SO U.S., 3 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC A01N
NCL 424275000
CC 5-2 (Agrochemicals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3879536	A	19750422	US 1972-312217	19721204 <--
PRAI US 1972-312217		19721204 <--		

CLASS

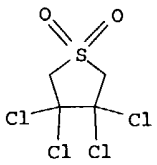
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3879536	IC	A01N
	NCL	424275000

AB A 3,3,3,4-tetrachlorotetrahydrothiophene-1,1-dioxide mixture with bis(trichloromethyl)sulfone [**56561-01-4**] showed synergistic bactericidal and fungicidal activityagainst microorganisms e.g. Aerobacter aerogenes, Bacillus subtilis, Penicillium and expansum, in industrial aqueous systems.

ST bactericide synergistic mixt; fungicide synergistic mixt; thiophenedioxide chloromethylsulfone synergism bactericide fungicide
IT **Bactericides**, Disinfectants and Antiseptics
Fungicides and Fungistats
(synergistic mixts., for industrial aqueous systems)
IT **56561-01-4**
RL: BIOL (Biological study)
(synergistic bactericide and fungicide for industrial aqueous systems)
IT **56561-01-4**
RL: BIOL (Biological study)
(synergistic bactericide and fungicide for industrial aqueous systems)
RN 56561-01-4 HCAPLUS
CN Thiophene, 3,3,4,4-tetrachlorotetrahydro-, 1,1-dioxide, mixt. with sulfonylbis[trichloromethane] (9CI) (CA INDEX NAME)

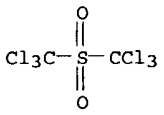
CM 1

CRN 3737-41-5
CMF **C4 H4 Cl4 O2 S**



CM 2

CRN 3064-70-8
CMF **C2 Cl6 O2 S**



L26 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1975:402249 HCAPLUS
DN 83:2249
ED Entered STN: 12 May 1984
TI Dioxide slime control composition
IN Brink, Robert H., Jr.; Shema, Bernard F.; Justice, Roger L.
PA Betz Laboratories, Inc.
SO U.S., 5 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC A01N
NCL 424275000
CC 5-2 (Agrochemicals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3862323	A	19750121	US 1971-182258	19710920 <--
CA 968702	A1	19750603	CA 1972-138665	19720330 <--
PRAI US 1971-182258		19710920 <--		

CLASS

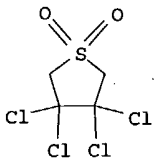
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3862323	IC	A01N
	NCL	424275000

AB A 5-chloro-4-phenyl-1,2-dithiol-3-one(I)-3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide(II) mixture [**55257-95-9**] is bactericidal and fungicidal. Thus, a I-II mixture (1:1) at 70 ppm completely inhibited growth of Aerobacter aerogenes and at 90 and 200 ppm controlled Penicillium expansum and Aspergillus niger, resp.

ST bactericide fungicide slime control
IT Algicides
(chlorophenyldithiolone-tetrachlorotetrahydrothiophenedioxide mixture)
IT **Bactericides**, Disinfectants and Antiseptics
Fungicides and Fungistats
(chlorophenylditholone-tetrachlorotetrahydrothiophenedioxide mixture)
IT **55257-95-9**
RL: BIOL (Biological study)
(algicide and bactericide and fungicide)
IT **55257-95-9**
RL: BIOL (Biological study)
(algicide and bactericide and fungicide)
RN 55257-95-9 HCAPLUS
CN 3H-1,2-Dithiol-3-one, 5-chloro-4-phenyl-, mixt. with 3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide (9CI) (CA INDEX NAME)

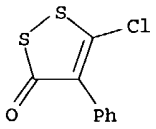
CM 1

CRN 3737-41-5
CMF **C4 H4 Cl4 O2 S**



CM 2

CRN 2425-05-0
CMF **C9 H5 Cl O S2**



L26 ANSWER 22 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1975:402248 HCAPLUS
DN 83:2248
ED Entered STN: 12 May 1984
TI Slime control compositions
IN Shema, Bernard F.; Brink, Robert H., Jr.; Swered, Paul; Justice, Roger L.
PA Betz Laboratories, Inc.
SO U.S., 6 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC A01N
NCL 424275000
CC 5-2 (Agrochemicals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3862322	A	19750121	US 1971-177814	19710903 <--
CA 974878	A1	19750923	CA 1972-136341	19720306 <--
PRAI US 1971-177814		19710903 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3862322	IC	A01N
	NCL	424275000

AB 3,3,4,4-Tetrachlorotetrahydrothiophene-1,1-dioxide (I)-phenol mixts., i.e., a I-2,4,5-trichlorophenol mixture [**55257-98-2**], I-pentachlorophenol mixture [**55257-97-1**] or I-4-chloro-2-cyclopentylphenol mixture [**55257-96-0**] are bactericides and

fungicides. Thus, a I-2,4,5-trichlorophenol mixture (1:1) at 50 ppm completely inhibited growth of Aerobactor aerogenes and at 500 ppm completely inhibited growth of Penicillium expansum and Aspergillus niger.

ST bactericide chlorotetrahydrothiophene dioxide phenol; fungicide chlorotetrahydrothiophene dioxide phenol

IT Algicides
Bactericides, Disinfectants and Antiseptics
Fungicides and Fungistats
(tetrachlorotetrahydrothiophenedioxide-phenol mixts.)

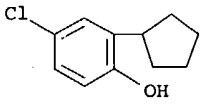
IT **55257-96-0 55257-97-1 55257-98-2**
RL: BIOL (Biological study)
(algicide and bactericide and fungicide)

IT **55257-96-0 55257-97-1 55257-98-2**
RL: BIOL (Biological study)
(algicide and bactericide and fungicide)

RN 55257-96-0 HCAPLUS
CN Phenol, 4-chloro-2-cyclopentyl-, mixt. with 3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide (9CI) (CA INDEX NAME)

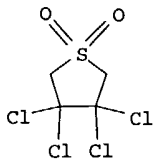
CM 1

CRN 13347-42-7
CMF **C11 H13 Cl O**



CM 2

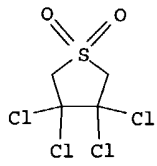
CRN 3737-41-5
CMF **C4 H4 Cl4 O2 S**



RN 55257-97-1 HCAPLUS
CN Phenol, pentachloro-, mixt. with 3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide (9CI) (CA INDEX NAME)

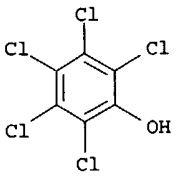
CM 1

CRN 3737-41-5
CMF **C4 H4 Cl4 O2 S**



CM 2

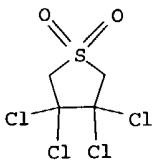
CRN 87-86-5
CMF **C6 H Cl5 O**



RN 55257-98-2 HCAPLUS
CN Phenol, 2,4,5-trichloro-, mixt. with 3,3,4,4-tetrachlorotetrahydrothiophen e 1,1-dioxide (9CI) (CA INDEX NAME)

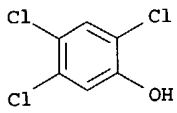
CM 1

CRN 3737-41-5
CMF **C4 H4 Cl4 O2 S**



CM 2

CRN 95-95-4
CMF **C6 H3 Cl3 O**



L26 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1974:564769 HCAPLUS
DN 81:164769
ED Entered STN: 12 May 1984
TI Composition for controlling aerobacter aerogenes
IN Shema, Bernard F.; Brink, Robert H., Jr.; Justice, Roger L.
PA Betz Laboratories, Inc.
SO U.S., 7 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC A01N
NCL 424275000
CC 5-3 (Agrochemicals)
FAN.CNT 1

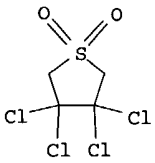
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3821396	A	19740628	US 1972-237534	19720323 <--
	CA 968704	A1	19750603	CA 1972-152930	19720929 <--
PRAI	US 1972-237534		19720323	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3821396	IC	A01N
	NCL	424275000

AB Combinations of 3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide (I) [**3737-41-5**] with anionic sulfonate surfactants inhibited the growth of slime in water. Thus, I and Na dodecylbenzenesulfonate [25155-30-0] (1:1) at 8 ppm completely inhibited A. aerogenes. I and the sulfonate surfactant (1:10), at 50 ppm, completely inhibited Penicillium expansum and at 100 ppm, completely inhibited Aspergillus niger.

ST chlorothiophene surfactant bactericide; fungicide dodecylbenzenesulfonate chlorothiophene deriv
IT **Bactericides**, Disinfectants and Antiseptics
Fungicides and Fungistats
(anionic sulfonate surfactant-synergized tetrachlorotetrahydrothiophene dioxide)
IT Surfactants
(anionic, sulfonate, as tetrachlorotetrahydrothiophene dioxide synergists, for bactericidal and fungicidal action)
IT Enterobacter aerogenes
Slime mold
(control of, by anionic sulfonate surfactant-synergized tetrachlorotetrahydrothiophene dioxide)
IT 25155-30-0
RL: BIOL (Biological study)
(as tetrachlorotetrathiophene dioxide synergist, bactericidal and fungicidal action)
IT **3737-41-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(bactericidal and fungicidal action of, anionic sulfonate surfactants as synergist for)
IT **3737-41-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(bactericidal and fungicidal action of, anionic sulfonate surfactants as synergist for)
RN 3737-41-5 HCAPLUS
CN Thiophene, 3,3,4,4-tetrachlorotetrahydro-, 1,1-dioxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L26 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1973:432044 HCAPLUS
DN 79:32044
ED Entered STN: 12 May 1984
TI 6-[(1-Aminothiocycloalkanoyl)amino]penicillanic acids
IN Wendt, Gerhard R.; Clark, Donald E.; Grant, Norman H.
PA American Home Products Corp.
SO U.S., 3 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC C07D
NCL 260239100
CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

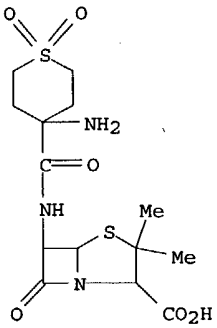
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3734904	A	19730522	US 1971-165712	19710723 <--
PRAI US 1971-165712		19710723 <--		

CLASS

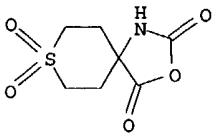
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3734904	IC	C07D
	NCL	260239100

GI For diagram(s), see printed CA Issue.
AB The antibacterial penicillanic acids (I, A = S, SO, SO2, n = 1, 2) were prepared Thus, 4-aminotetrahydro-2H-thiopyran-4-carboxylic acid was treated with COCl2 to give the anhydride II which was then treated with 6-aminopenicillanic acid to give I (A = S, n = 2). Antibacterial test data were given.
ST bactericide thiopyranylpenicillanic acid; penicillanic acid thiopyranyl; thienyl penicillanic acid
IT **Bactericides**, Disinfectants and Antiseptics
(thiopyranopenicillanic acids)

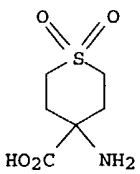
IT 39124-18-0P **39480-05-2P** 39974-66-8P 41837-33-6P
41837-36-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 41837-35-8 41837-38-1 **41837-41-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with 6-aminopenicillanic acid)
IT 551-16-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with azaspirodecanediones)
IT 32418-99-8 39124-16-8 **39124-27-1** 39974-63-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phosgene)
IT **39480-05-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 39480-05-2 HCAPLUS
CN 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[(4-aminotetrahydro-1,1-dioxido-2H-thiopyran-4-yl)carbonyl]amino]-3,3-dimethyl-7-oxo-, [2S-(2.alpha.,5.alpha.,6.beta.)]- (9CI) (CA INDEX NAME)



IT **41837-41-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with 6-aminopenicillanic acid)
RN 41837-41-6 HCAPLUS
CN 3-Oxa-8-thia-1-azaspiro[4.5]decane-2,4-dione, 8,8-dioxide (9CI) (CA INDEX NAME)



IT **39124-27-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phosgene)
RN 39124-27-1 HCAPLUS
CN 2H-Thiopyran-4-carboxylic acid, 4-aminotetrahydro-, 1,1-dioxide (9CI) (CA INDEX NAME)



L26 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1969:481376 HCAPLUS

DN 71:81376
ED Entered STN: 12 May 1984
TI Pesticidal cyclic sulfates
IN Tong, Yu-Lan Chang; Tomalia, Donald A.; Sheetz, David P.
PA Dow Chemical Co.
SO U.S., 8 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC C07D; B01J
NCL 260327000
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

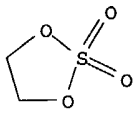
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3454597	A	19690708	US 1966-593709	19661114 <--
PRAI	US 1966-593709		19661114 <--		

CLASS

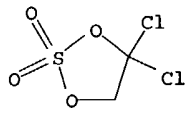
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3454597	IC	C07DIC B01J
	NCL	260327000

GI For diagram(s), see printed CA Issue.
AB Prepns. are described for ethylene (Ia) and vinylene sulfates, especially Ia (R = Cl, R1 = R2 = R3 = H) (I), Ia (R = F, R1 = R2 = R3 = H) (II), 1,3,2-dioxathiole 2,2,-dioxide (III), and Ia (R = R2 = Br, R1 = R3 = H) (IV). Addnl. substitution in the 4- and 5-positions by halogen, Me, or Ph is claimed. Thus, 74.5 g. 1,3,2-dioxathiolane 2,2-dioxide (V) in 150 ml. CCl4 was heated to reflux. A 250 w. sunlamp was placed 2-4 in. from the reaction vessel as gaseous Cl was passed into the reaction mixture at 60 millimoles/hr. After 15 hrs. reaction time, there was obtained 68% I, b1.cntdot.8 81-3.degree., n25D 1.4505; 11% trans-Ia (R = R2 = Cl, R1 = R3 = H) (trans-VI), b0.cntdot.7 48-9.degree., m. 48-9.degree.; 4% Ia (R = R1 = Cl, R2 = R3 = H) (VII), b0.cntdot.& 40.degree., n25D 1.4502. After 22 hrs. there was obtained 65% I, 23% VI, and 9% VII; after 39 hrs., the product mixture was 24% I, 55% VI, 17% VII, and 3% Ia (R = R1 = R2 = Cl, R3 = H) (VIII). Similar chlorination of 37.2 g. V in 60 ml. CHCl3 gave the following: after 13 hrs., 90% I; after 31 hrs., 74% I, 19% VI; after 59 hrs., 61% I, 30% VI and 9% VII. Chlorination of 24.8 g. V in 60 ml. CCl4 at a rate of 120 millimoles/hr. Cl 20 hrs. gave 46% VI, 9% VII, 35% VIII, 10% cis-Vi; no I was observed. To prepare II, 23 g. HgF2 in 50 ml. CCl4 was cooled to 0-5%, and 7.92 g. I was added portionwise with stirring. The reaction mixture was stirred at 0-5% 1.5 hrs., then the CCl4 was decanted. The solid residue was washed with five 20-ml. portions of CCl4 and the CCl4 exts. were combined and worked up to give II, m. 48-50.degree.. Alternatively, 2.6 g. I was added portionwise at room temperature to a mixture of 3.2 g. AgBF4 in 50 ml. Et2O. The mixture was allowed to stand 2.5 days to give II, m. 49-50.degree.. To prepare III, 1.59 g. I and 1.66 g. AgOAc were mixed in 15 ml. anhydrous MeCN. There was an exotherm from room temperature to about 30.degree., after which the reaction mixture was refluxed 15 min. The reaction was repeated, except that tetrahydrofuran (THF) was used as the solvent with the same results. Alternatively, a solution of 24 g. VI in 250 ml. THF was added portionwise to a stirred suspension of 10 g. Mg in 10 ml. THF activated by 0.5 ml. ClCH2Ch2Cl. The rate of addition was adjusted to bring the reaction mixture to reflux, and the mixture was refluxed for an addnl. 2 hrs. Filtration and solvent removal gave III, m. 51.5-2.5.degree.. To prepare IV, about 5-8 drops Br were added with stirring to 0.4 g. III at room temperature The reaction mixture was stirred overnight at room temperature An addnl. 1.5 g. Br was added and the reaction mixture was stirred at room temperature for another 48 hrs. Isolation and recrystn. gave IV, m. 69-70.5.degree.. I-IV are agents which control growth of bacteria, fungi and other microorganisms.
ST dioxathiolanes dioxides; dioxides dioxathiolanes; pesticides dioxathiolanes
IT **Bactericides**
Fungicides
Pesticides
(cyclic ethylene sulfates as)
IT **1072-53-3P 23910-95-4P 23910-96-5P 23910-97-6P 23910-98-7P 23911-00-4P 23958-21-6P 24036-33-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **1072-53-3P 23910-95-4P 23910-96-5P 23910-97-6P 23910-98-7P 23911-00-4P 23958-21-6P 24036-33-7P**

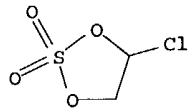
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 1072-53-3 HCAPLUS
CN 1,3,2-Dioxathiolane, 2,2-dioxide (9CI) (CA INDEX NAME)



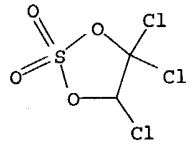
RN 23910-95-4 HCAPLUS
CN 1,2-Ethanediol, 1,1-dichloro-, cyclic sulfate (8CI) (CA INDEX NAME)



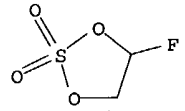
RN 23910-96-5 HCAPLUS
CN 1,2-Ethanediol, 1-chloro-, cyclic sulfate (8CI) (CA INDEX NAME)



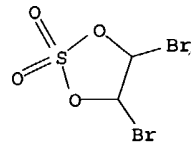
RN 23910-97-6 HCAPLUS
CN 1,2-Ethanediol, 1,1,2-trichloro-, cyclic sulfate (8CI) (CA INDEX NAME)



RN 23910-98-7 HCAPLUS
CN 1,2-Ethanediol, 1-fluoro-, cyclic sulfate (8CI) (CA INDEX NAME)

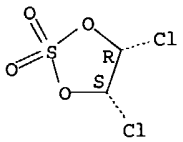


RN 23911-00-4 HCAPLUS
CN 1,2-Ethanediol, 1,2-dibromo-, cyclic sulfate (8CI) (CA INDEX NAME)



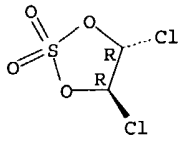
RN 23958-21-6 HCAPLUS
CN 1,2-Ethanediol, 1,2-dichloro-, cyclic sulfate, cis- (8CI) (CA INDEX NAME)

Relative stereochemistry.



RN 24036-33-7 HCAPLUS
CN 1,2-Ethanediol, 1,2-dichloro-, cyclic sulfate, trans- (8CI) (CA INDEX NAME)

Relative stereochemistry.



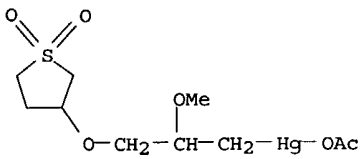
L26 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1968:58735 HCAPLUS
DN 68:58735
ED Entered STN: 12 May 1984
TI Mercurial sulfolane biocides
IN Goonewardene, Hilary F.; Loev, Bernard
PA Smith Kline and French Laboratories
SO U.S., 4 pp.
CODEN: USXXAM
DT **Patent**
LA English
NCL 167033000
CC 19 (Pesticides)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3361625	A	19680102	US 1965-425950	19650115 <--
PRAI US 1965-425950		19650115 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3361625	NCL	167033000

GI For diagram(s), see printed CA Issue.
AB Many species of bacteria and fungi are controlled by 5-625 ppm. compns. of 3-acetoxymercuri-2-(methoxypropyl) 3-sulfolanyl ether (I) and 3-(acetoxymercuri)-2-methoxysulfolane. These compds. have very low toxicities to mammals; oral doses of 300 mg./kg. did not harm rats. They are recommended for protection of crops against pathogens.
ST PLANT PATHOGENS SULFOLANES; SULFOLANES FUNGICIDES; BACTERICIDES SULFOLANES; FUNGICIDES SULFOLANES
IT **Bactericides**
Fungicides
(mercurial sulfolane as)
IT Thiophene, tetrahydro-2-methoxy-, 1,1-dioxide, mercury complex
Thiophene, tetrahydro-3-(2-methoxypropoxy)-, 1,1-dioxide, mercury complex
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **20299-91-6**
RL: BIOL (Biological study)
(as bactericides and fungicides)
IT 20299-92-7
RL: BIOL (Biological study)
(as bacterides and fungicides)
IT **20299-91-6**
RL: BIOL (Biological study)
(as bactericides and fungicides)
RN 20299-91-6 HCAPLUS
CN Mercury, (acetato)[2-methoxy-3-[(tetrahydro-3-thienyl)oxy]propyl]-, S,S-dioxide (8CI) (CA INDEX NAME)



L26 ANSWER 27 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1965:410176 HCAPLUS
DN 63:10176
OREF 63:**1800f-h,1801a-b**
ED Entered STN: 22 Apr 2001
TI 4-Trifluoromethyl-2-thio-5 H-alka[d]pyrimidines and congeners
IN Wagner, Hans A.
PA G.D. Searle and Co.
SO 4 pp.
DT **Patent**
LA Unavailable
NCL 260251000
CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

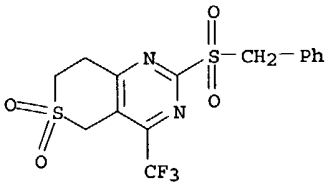
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3177216		19650406	US	19611228 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3177216	NCL	260251000

GI For diagram(s), see printed CA Issue.
AB The title compds. I, where R = (CH2)n or a divalent group are prepared from cyclic ketones, trifluoroacetyl derivs. and appropriate 2-thiopseudouronium mineral acid salts. I may be oxidized by peracetic acid to the sulfonyl derivs. II. Thus, to a suspension of MeONa 18 in Et2O 350, F3CCO2Et 36 parts is added with vigorous agitation during 20 min. A solution of cyclopentanone 25 in Et2O 150 parts is introduced. The mixture is refluxed 2 hrs., allowed to stand at room temperature overnight, HOAc 21 in H2O 100 is added, then Mg(OAc)2 37 in H2O 25 parts. Et2O is removed by distillation and the residue worked up to yield 2-trifluoroacetylcyclopentanone (III), b. 27.degree./2 mm. A mixture of III 3 and 2-methyl-2-thiopseudouronium sulfate 3 in EtOH 80 is refluxed 18 hrs., the EtOH removed by vacuum distillation and the residue poured into H2O 200 parts. The mixture is extracted with pentane and the 4-trifluoromethyl-6,7-dihydro-2-methylthio-5H-cyclopenta[d]pyrimidine (IV), which crystallizes upon cooling to dry ice temperature, is filtered off and dried in air; m. 61-3.degree.. To a solution of IV 1 in HOAc 10, is added 40% peracetic acid 2 parts at 60.degree.. The mixture is poured into cold H2O 200 to give 4-trifluoromethyl-6,7-dihydro-2-methylsulfonyl-5H-cyclopenta[d]pyrimidine, m. 118-19.degree. (EtOH-AcOEt). Other products reported are 2-trifluoroacetylcyclohexanone, 4-trifluoromethyl-5,6,7,8-tetrahydro-2-methylthioquinazoline, 2-trifluoroacetylcycloheptanone, 4-trifluoromethyl-6,7,8,9-tetrahydro-2-methyl-5H-cyclohepta[d]pyrimidine, 4-trifluoromethyl-6,7,8,9-tetrahydro-2-methylthio-5H-cyclohepta[d]pyrimidine, m. 86.degree., trifluoroacetylcyclooctanone, 4-trifluoromethyl .cntdot.5,6,7,8,9,10-hexahydro-2-methylthiocycloocta[d]pyrimidine, 4-trifluoromethyl-5,6,7,8,9,10-hexahydro-2-methylsulfonylcycloocta[d]pyrimidine, m. 86.degree., 2-trifluoroacetylcindanone, 4-trifluoromethyl-6,7,8,9-tetrahydro-2-methylthio-5H-indano[1,2-d]pyrimidine, m. 86.degree., 2-trifluoroacetyl-3,4-dihydro-1(2H)-naphthalenone, m. 49.degree., 4-trifluoromethyl-5,6-dihydro-2-methylthiobenzo[h]quinazoline, m. 144.degree., 4-trifluoromethyl-5,6-dihydro-2-methyl-sulfonylbenzo[h]quinazoline, m. 223-4.degree., 2-trifluoroacetyltetrahydro-1,4-thiopyrone, 2-benzylthio-4-trifluoromethyl-7,8-dihydro-5H-thiopyrano[4,3-d]pyrimidine, and 2-benzylsulfonyl-4-trifluoromethyl-7,8-dihydro-5H-thiopyrano[4,3-d]pyrimidine, m. 148-50.degree.. The title compds. (I) are useful as antibiotics, bactericides, and fungicides.
IT **Bactericides**, Disinfectants and Antiseptics
Fungicides or Fungistats
(5,6-cycloalkylene-2-(methylthio)-4-(trifluoromethyl)pyrimidine derivs. as)
IT 2'-Acetonaphthone-6'-(acetonyloxy)-, 2,2,2-trifluoro-1',2',3',4'-tetrahydro-1'-oxo-

Benzo[h]quinazoline, 5,6-dihydro-4-(p-methoxyphenyl)-, 5,6-dihydro-2-(methylsulfonyl)-4-(trifluoromethyl)-
IT 4853-84-3, Aziridine, 1,1'-isophthaloylbis[2-ethyl-
(as curing agent for fluorinated polyesters and fluorinated vinyl compound polymers)
IT 136547-20-1, Pyrimidine, 2-(methylthio)-4-(trifluoromethyl)-
(derivs.)
IT 361-73-9, Cyclopentanone, 2-(trifluoroacetyl)- 576-12-5, 1-Indanone, 2-(trifluoroacetyl)- 1708-57-2, Quinazoline, 5,6,7,8-tetrahydro-2-(methylthio)-4-(trifluoromethyl)- 1708-67-4, 5H-Cyclopentapyrimidine, 6,7-dihydro-2-(methylthio)-4-(trifluoromethyl)- 1708-68-5, 5H-Cyclopentapyrimidine, 6,7-dihydro-2-(methylsulfonyl)-4-(trifluoromethyl)- 1739-86-2, 5H-Cycloheptapyrimidine, 6,7,8,9-tetrahydro-2-(methylthio)-4-(trifluoromethyl)- 1739-87-3, Cyclooctapyrimidine, 5,6,7,8,9,10-hexahydro-2-(methylthio)4-(trifluoromethyl)- 1739-88-4, Cyclooctapyrimidine, 5,6,7,8,9,10-hexahydro-2-(methylsulfonyl)-4-(trifluoromethyl)- 1739-90-8, 5H-Indeno[1,2-d]pyrimidine, 2-(methylthio)-4-(trifluoromethyl)- 1805-99-8, Benzo[h]quinazoline, 5,6-dihydro-2-(methylthio)-4-(trifluoromethyl)- 1806-00-4, 5H-Thiopyrano[4,3-d]pyrimidine, 2-(benzylthio)-7,8-dihydro-4-(trifluoromethyl)- **1842-44-0**, 5H-Thiopyrano[4,3-d]pyrimidine, 2-(benzylsulfonyl)-7,8-dihydro-4-(trifluoromethyl-, 6,6-dioxide 2402-32-6, 5H-Cycloheptapyrimidine, 6,7,8,9-tetrahydro-2-(methylsulfonyl)-4-(trifluoromethyl)- 89678-03-5, 4H-Thiopyran-4-one, tetrahydro-2-(trifluoroacetyl)-(?)
(preparation of)
IT **1842-44-0**, 5H-Thiopyrano[4,3-d]pyrimidine, 2-(benzylsulfonyl)-7,8-dihydro-4-(trifluoromethyl-, 6,6-dioxide
(preparation of)
RN 1842-44-0 HCAPLUS
CN 5H-Thiopyrano[4,3-d]pyrimidine, 7,8-dihydro-2-[(phenylmethyl)sulfonyl]-4-(trifluoromethyl)-, 6,6-dioxide (9CI) (CA INDEX NAME)



L26 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1964:440477 HCAPLUS
DN 61:40477
OREF 61:**7029a-f**
ED Entered STN: 22 Apr 2001
TI 4-Oxy-3-maleimidyl betaines
IN Shapiro, Seymour L.; Freedman, Louis; Karten, Marvin J.
PA U.S. Vitamin & Pharmaceutical Corp.
SO 6 pp.
DT **Patent**
LA Unavailable
NCL 260247200
CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3129225		19640414	US	19610607 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3129225	NCL	260247200

GI For diagram(s), see printed CA Issue.
AB The title compds. (I and II) are antibacterials and antiparasitics and reduce serum cholesterol levels. They are prepared by reaction of N-substituted dichloromaleimides (III and IV) with tertiary amines. Dichloromaleic anhydride (9.0 g.) in 15 ml. AcOH and 5.2 g. H2NCH2CO2Et were kept 1 hr. at 100.degree., cooled, and 15 ml. H2O was added to give 4.6 g. III (R = CH2CO2Et), m. 73-4.degree.. The following III were similarly prepared (R and m.p. given): H, 180.degree.; CH2CH:CH2, 62.degree.; Bu, 38.degree.; iso-pentyl, 57-8.degree.; lauryl, 61.degree.; lauryloxypropyl, 46.degree.; CH2CH2OH, 58-9.degree.; cyclohexyl, 143-4.degree.; PhCH2, 112-13.degree.; CHPh2, 115-16.degree.; CH2CH2Ph,

134.degree.; CHMeCH2Ph, 84.degree.; 2-furyl, 66.degree.; Ph, 208-10.degree.; 2-ClC6H4, 132.degree.; 3-ClC6H4, 183.degree.; 4-ClC6H4 (V), 210-16.degree.; 4-IC6H4, 251-4.degree.; 4-MeOC6H4, 209-10.degree.; 2-CF3C6H4, 152.degree.; 1-naphthyl, 204.degree.; 3-sulfolanyl, 250.degree.. The following IV were also prepared (Y and m.p. given): CH2CH2, 296-9.degree.; (CH2)6, 193.degree.; 1,3-xylylene, 127-9.degree.. A suspension of 2.77 g. V in 20 ml. MeOH was treated with 5.1 g. Me2NBu, refluxed 18 hrs., and poured into 20 ml. H2O to give 2.3 g. I (R = 4-ClC6H4, Z = Me2NBu), m. 205-7.degree.. The following I were similarly prepared (R, Z, and m.p. given): 4-IC6H4, PhCH2NMe2, 180.degree.; lauryl, imidazole, 245.degree.; PhCH2CH2, imidazole, 268-70.degree.; 3-ClC6H4, imidazole, >300.degree.; H, pyridine, >300.degree.; lauryloxypropyl, pyridine, 101.degree.; PhCH2, pyridine, 208-9.degree.; PhCH2CH2, pyridine, 170-1.degree.; 2-ClC6H4, 4-picoline, 293-4.degree.; 4-IC6H4, 4-picoline, >300.degree.; CH2CH2OH, 4-pentylpyridine, 152.degree.; lauryloxypropyl, 4-pentylpyridine, 116-18.degree.; 3-sulfolanyl, 4-pentylpyridine, 192-3.degree.; lauryl, 4-benzyl-pyridine, 165.degree.; cyclohexyl, 4-benzylpyridine, 275-6.degree.; 4-MeOC6H4, 4-benzylpyridine, 227.degree.; PhCH2CH2, 3-hydroxypyridine, 296-8.degree.; 2-furfuryl, 3-hydroxypyridine, >300.degree.; 3-sulfolanyl, 3-hydroxypyridine, >300.degree.; 4-IC6H4, 3-acetylpyridine, 255-8.degree.; 4-MeOC6H4, 3-acetylpyridine, 224.degree.; PhCH2CH2, 3-formylpyridine, 103-4.degree.; PhCH2CH2, 4-formylpyridine, 232-3.degree.; PhCH2CH2, isonicotinic acid, 268.degree.; 4-ClC6H4, Et nicotinate, 213-14.degree.; furyl, Et nicotinate, 193.degree.; isopentyl, Me isonicotinate, 237-8.degree.; Bu, nicotinamide, 274-5.degree.; lauryloxypropyl, nicotinamide, 253-5.degree.; PhCH2CH2, nicotinamide, 284-5.degree.; 2-F3CC6H4; nicotinamide, >300.degree.; allyl, N,N-diethylnicotinamide (VI), 177-8.degree.; CH2CO2Et, VI, 139.degree.; CHPh2, VI, 235-6.degree.; 2-F3CC6H4, VI, 189-90.degree.; 4-MeOC6H4, VI, 210.degree.; PhCH2CH2, isonicotinic acid hydrazide, 185-95.degree.; PhCH2CH2, 4-pyridine aldoxime, 263.degree.; lauryl, 3-aminopyridine, 162-5.degree.; PhCH2CH2, 3-aminopyridine, 223-9.degree.; PhCH2CHMe, 3-aminopyridine, 200.degree.; isopentyl, 4-aminopyridine, 265.degree.; PhCH2CH2, pyrazine, >300.degree.; PhCH2CH2, 2-methylpyrazine, 195-6.degree.; PhCH2CH2, pyridazine, 189-90.degree.; allyl, isoquinoline, 185.degree.; CHPh2, isoquinoline, >300.degree.; lauryl, N-methylmorpholine, 173.degree.; PhCH2CH2, N-methylmorpholine, 169-70.degree.; 3-ClC6H4, N-methylmorpholine, 210-11.degree.. The following II were also prepared (Y, Z, and m.p. given): CH2CH2, 4-benzylpyridine, 260.degree.; (CH2)6, pyridine, >300.degree.; 1,3-xylylene, 4-pentylpyridine, >300.degree..

IT **Bactericides**, Disinfectants and Antiseptics
(betaines from maleimide derivs. as)

IT Parasiticides
(betaines of maleimide derivs. as)

IT Betaines
(of maleimide derivs.)

IT Ammonium, butyl[1-(p-chlorophenyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]dimethyl, hydroxide, inner salt
Imidazolium compounds, 3-(1-dodecyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt
Imidazolium compounds, 3-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Imidazolium compounds, 3-[1-(m-chlorophenyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Isoquinolinium compounds, 2-(1-allyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt
Isoquinolinium compounds, 2-[1-(diphenylmethyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Morpholinium compounds, 4-(1-dodecyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-4-methyl-, hydroxide, inner salt
Morpholinium compounds, 4-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-4-methyl-, hydroxide, inner salt
Morpholinium compounds, 4-[1-(m-chlorophenyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-4-methyl-, hydroxide, inner salt
Picolinium, 1-[1-(o-chlorophenyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-4-, hydroxide, inner salt
Picolinium, 1-[4-hydroxy-1-(p-iodophenyl)-2,5-dioxo-3-pyrrolin-3-yl]-4-, hydroxide, inner salt
Pyrazinium compounds, 1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyrazinium compounds, 1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)methyl-, hydroxide, inner salt
Pyridazinium compounds, 1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 1,1'-[(m-phenylenedimethylene)bis[4-hydroxy-2,5-dioxo-3-

pyrroline-1,3-diyl)]bis[4-pentyl- hydroxide inner salt]
Pyridinium, 1,1'-[ethylenebis(4-hydroxy-2,5-dioxo-3-pyrroline-1,3-diyl)]bis[4-benzyl- hydroxide inner salt]
Pyridinium, 1,1'-[hexamethylenebis(4-hydroxy-2,5-dioxo-3-pyrroline-1,3-diyl)bis[- hydroxide inner salt]
Pyridinium, 1-(1-allyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-3-(diethylcarbamoyl)-, hydroxide, inner salt
Pyridinium, 1-(1-butyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-3-carbamoyl-, hydroxide, inner salt
Pyridinium, 1-(1-furfuryl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-3-hydroxy-, hydroxide, inner salt
Pyridinium, 1-[1-(carboxymethyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-3-(diethylcarbamoyl)-, hydroxide, inner salt, Et ester
Pyridinium, 1-[1-[3-(dodecyloxy)propyl]-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 1-[1-[3-(dodecyloxy)propyl]-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-4-pentyl-, hydroxide, inner salt
Pyridinium, 1-[4-hydroxy-1-(2-hydroxyethyl)-2,5-dioxo-3-pyrrolin-3-yl]-4-pentyl-, hydroxide, inner salt
Pyridinium, 1-[4-hydroxy-1-(p-methoxyphenyl)-2,5-dioxo-3-pyrrolin-3-yl]-4-methoxy-, hydroxide, inner salt
Pyridinium, 1-[4-hydroxy-2,5-dioxo-1-(tetrahydro-3-thienyl)-3-pyrrolin-3-yl]-4-pentyl-, hydroxide, inner salt, S,S-dioxide
Pyridinium, 3-(diethylcarbamoyl)-1-[1-(diphenylmethyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 3-(diethylcarbamoyl)-1-[4-hydroxy-1-(p-methoxyphenyl)-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 3-acetyl-1-[4-hydroxy-1-(p-iodophenyl)-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 3-acetyl-1-[4-hydroxy-1-(p-methoxyphenyl)-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 3-amino-1-(1-dodecyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 3-amino-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 3-amino-1-[4-hydroxy-1-(.alpha.-methylphenethyl)-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 3-carbamoyl-1-[1-[3-(dodecyloxy)propyl]-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt
Pyridinium, 3-carboxy-1-(1-furfuryl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt, Et ester
Pyridinium, 3-carboxy-1-[1-(p-chlorophenyl)-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl]-, hydroxide, inner salt, Et ester
Pyridinium, 3-formyl-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 3-hydroxy-1-[4-hydroxy-2,5-dioxo-1-(tetrahydro-3-thienyl)-3-pyrrolin-3-yl]-, hydroxide, inner salt, S,S-dioxide
Pyridinium, 4-amino-1-(4-hydroxy-1-isopentyl-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 4-benzyl-1-(1-cyclohexyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 4-benzyl-1-(1-dodecyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 4-carboxy-1-(4-hydroxy-1-isopentyl-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt, Me ester
Pyridinium, 4-carboxy-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 4-carboxy-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt, hydrazide
Pyridinium, 4-formyl-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt
Pyridinium, 4-formyl-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt, 4-oxime

IT 541-59-3, Maleimide
(betaine derivs.)

IT 57-88-5, Cholesterol
(in blood serum, betaines of maleimide deriva. for lowering of)

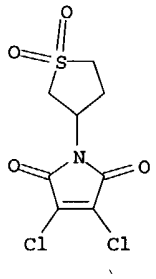
IT 1193-54-0, Maleimide, 2,3-dichloro- 1813-61-2, Pyridinium, 3-carbamoyl-1-[4-hydroxy-2,5-dioxo-1-(.alpha.,.alpha.,.alpha.-trifluoro-o-tolyl)-3-pyrrolin-3-yl]-, hydroxide, inner salt 1996-17-4, Pyridinium, 3-(diethylcarbamoyl)-1-[4-hydroxy-2,5-dioxo-1-(.alpha.,.alpha.,.alpha.-trifluoro-o-tolyl)-3-pyrrolin-3-yl]-, hydroxide, inner salt 3116-38-9, Pyridinium, 1-(4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt 3116-39-0, Pyridinium, 1-(1-benzyl-4-hydroxy-2,5-dioxo-3-pyrrolin-3-yl)-, hydroxide, inner salt 3116-40-3, Pyridinium, 1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt 3116-42-5,

Pyridinium, 3-hydroxy-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt 3116-43-6, Pyridinium, 3-carbamoyl-1-(4-hydroxy-2,5-dioxo-1-phenethyl-3-pyrrolin-3-yl)-, hydroxide, inner salt 3116-48-1, Ammonium, benzyl[4-hydroxy-1-(p-iodophenyl)-2,5-dioxo-3-pyrrolin-3-yl]dimethyl, hydroxide, inner salt 3116-49-2, Maleimide, 2,3-dichloro-N-phenethyl- 3259-35-6, Maleimide, 2,3-dichloro-N-(.alpha.,.alpha.,.alpha.-trifluoro-o-tolyl)- 3876-05-9, Maleimide, 2,3-dichloro-N-phenyl- 16114-24-2, Maleimide, N-benzyl-2,3-dichloro-20198-79-2, Maleimide, N-butyl-2,3-dichloro- 29236-09-7, Maleimide, 2,3-dichloro-N-(p-chlorophenyl)- 29244-58-4, Maleimide, N,N'-hexamethylenebis[2,3-dichloro- 29302-18-9, Maleimide, 2,3-dichloro-N-(o-chlorophenyl)- 34281-49-7, Maleimide, 2,3-dichloro-N-(m-chlorophenyl)- 34379-53-8, Maleimide, 2,3-dichloro-N-(p-methoxyphenyl)- 42550-65-2, Maleimide, 2,3-dichloro-N-dodecyl- 50343-26-5, Maleimide, 2,3-dichloro-N-cyclohexyl- 50787-99-0, Maleimide, N,N'-ethylenebis[2,3-dichloro- 52752-45-1, Maleimide, 2,3-dichloro-N-furfuryl- 54908-07-5, Maleimide, N-allyl-2,3-dichloro- 65833-15-0, Maleimide, 2,3-dichloro-N-(p-iodophenyl)- 74121-48-5, Maleimide, 2,3-dichloro-N-(diphenylmethyl)- 89581-85-1, Maleimide, 2,3-dichloro-N-(2-hydroxyethyl)- 89938-80-7, 3-Pyrroline-1-acetic acid, 3,4-dichloro-2,5-dioxo-, ethyl ester 90416-65-2, Maleimide, 2,3-dichloro-N-isopentyl- **91862-51-0**, Maleimide, 2,3-dichloro-N-(tetrahydro-3-thienyl)-, S,S-dioxide 92023-53-5, Maleimide, 2,3-dichloro-N-(.alpha.-methylphenethyl)- 92167-42-5, Maleimide, 2,3-dichloro-N-1-naphthyl- 95367-58-1, Maleimide, 2,3-dichloro-N-[3-(dodecyloxy)propyl]- 97737-94-5, Maleimide, N,N'-(m-phenylenedimethylene)bis[2,3-dichloro-
(preparation of)

IT **91862-51-0**, Maleimide, 2,3-dichloro-N-(tetrahydro-3-thienyl)-, S,S-dioxide
(preparation of)

RN 91862-51-0 HCAPLUS

CN Maleimide, 2,3-dichloro-N-(tetrahydro-3-thienyl)-, S,S-dioxide (7CI) (CA INDEX NAME)



L26 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1963:403412 HCAPLUS

DN 59:3412

OREF 59:**576b-d**

ED Entered STN: 22 Apr 2001

TI Killing microorganisms, plant pests, and plants with halogenated thiophene 1,1-dioxides

IN Bluestone, Henry

PA Diamond Alkali Co.

SO 5 pp.; Continuation-in-part of U.S. 2,976,297 (CA 55, 16567dC.

DT **Patent**

LA Unavailable

NCL 071002500

CC 37 (Heterocyclic Compounds (One Hetero Atom))

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3073691		19630115	US	19600223 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3073691	NCL	071002500

GI For diagram(s), see printed CA Issue.

AB I possess high biol. activity as insecticides, fungicides, herbicides, and bactericides. These compds. are prepared by treating a polyhalotetrahydrothiophene 1,1-dioxide or a polyhalodihydrothiophene 1,1-dioxide, with an alkaline solution Thus, to 258 g. (1 mole)

3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide dissolved in 2 l. MeOH was added 150 g. aqueous NH3 (28%) at 30-5.degree.. H2O (1 l.) was added and MeOH distilled at 40.degree./20-5 mm. The precipitate was filtered off, washed, recrystd., and dried in vacuo to give I (R = H, R1 = R2 = Cl), m. 112-13.degree., H2O solubility >5%. Similarly were prepared I (R = R2 = Cl, R1 = H) and I(R = R1 = R2 = Cl), .lambda. 238 and 312 m.mu..

IT Fungicides or Fungistats
Insecticides
(halo thiophene 1,1-dioxides as)

IT Herbicides
(thiophene 1,1-dioxide halo derivs. as)

IT **Bactericides**, Disinfectants and Antiseptics
(thiophene 1,1-dioxides halo derivs. as)

IT 27092-46-2, Thiophene, 1,1-dioxide
(halo derivs., bactericidal activity of)

IT 695-69-2, Thiophene, 3,4-difluoro-, 1,1-dioxide 52819-14-4, Thiophene, 3,4-dichloro-, 1,1-dioxide 52819-15-5, Thiophene, 2,3,4-trichloro-, 1,1-dioxide 72448-17-0, Thiophene, tetrachloro-, 1,1-dioxide 72541-87-8, Thiophene, 2,5-dichloro-, 1,1-dioxide 89066-19-3, Thiophene, 3-bromo-, 1,1-dioxide 89088-95-9, Thiophene, 2,5-dibromo-, 1,1-dioxide 89088-96-0, Thiophene, 3,4-dibromo-, 1,1-dioxide 89088-98-2, Thiophene, 2,3-dichloro-, 1,1-dioxide 89088-99-3, Thiophene, 2,4-dichloro-, 1,1-dioxide 89211-17-6, Thiophene, 2,3,4-tribromo-, 1,1-dioxide 89280-14-8, Thiophene, 3-chloro-, 1,1-dioxide
(preparation of)

L26 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1963:62330 HCAPLUS
DN 58:62330
OREF 58:**10677f-g**
ED Entered STN: 22 Apr 2001
TI Nitrile ester pesticide
IN Miller, Lee A.
PA Monsanto Chemical Co.
SO 3 pp.
DT **Patent**
LA Unavailable
NCL 167022000
CC 72 (Pesticides)

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3078210		19630219	US	19610103 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3078210	NCL	167022000

AB Esters of the formula NCROC(:O)C.tplbond.CH, where R is C2-6 alkylene radical, were tested as biol. toxicants. A mixture of 14.2 g. hydracrylonitrile, 15.4 g. propiolic acid, 0.5 g. 4-toluenesulfonic acid, and 150 ml. C6H6 was refluxed 4.5 hrs., washed, and distilled to give 2-cyanoethyl propiolate (I), b25 127.degree., n25D = 1.4500. I in 0.001% solution completely inhibited Staphylococcus aureus and Salmonella typhosa; a 1:10,000 dilution of I inhibited Aspergillus niger; 0.003% I controlled Rhizoctonia solani and Pythium ultimum.

IT Aspergillus niger
(control by nitrile esters)

IT **Bactericides**, Disinfectants and Antiseptics
Fungicides or Fungistats
(nitrile esters as)

IT Pythium ultimum
Salmonella typhosa
(nitrile esters in control of)

IT Staphylococcus
(aureus (includes albus and citreus), nitrile esters in control of)

IT Hydracylonitrile, propiolate
Propiolic acid, esters, with hydracrylonitrile
(as bactericide and fungicide)

L26 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1959:94847 HCAPLUS
DN 53:94847
OREF 53:17149c-f
ED Entered STN: 22 Apr 2001
TI 1-Ethers, thioethers and esters of 4,5,6,7,10,10-hexachloro-4,7 - methylene - 4,7,8,9 - tetrahydrophthalan
IN Feichtinger, Hans; Puschhof, Siegfried

PA Ruhrchemie Akt.-Ges.
DT **Patent**
LA Unavailable
CC 10G (Organic Chemistry: Heterocyclic Compounds)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2881187		19590407	US	<--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2881187		

AB Preparation of 4,5,6,7,10,10 - hexachloro - 4,7 - methylene - 4,7,8,9 - tetrahydrophthalan (I) 1-ethers, thioethers, and esters and their efficiencies for use as insecticides, bactericides, and fungicides are described. I (34.4 g.) in 200 ml. CCl4 heated to boiling, 1.7 g. Br-H2O added (ultraviolet light) within 1 hr., CCl4 distilled in vacuo and the residue recrystd. from petr. ether gave 39.8 g. I 1-Br derivative (II), m. 75.degree.. Under similar conditions, II was prepared from I, N-bromosuccinimide, and Bz2O2 in CCl4. II (4.2 g.) refluxed 8 hrs. with 16 g. MeOH, concentrated to half-volume, and cooled to -10.degree. yielded I 1-methoxy derivative, m. 95.degree.. II refluxed with the corresponding alcs. and anhydrides yielded these derivs. of I: 1-ethoxy, m. 97.degree.; 1-propoxy, n20D 1.5345; 1-butoxy, n20D 1.5295; 1-acetoxy, m. 129.degree.. Addnl. derivs. of I were prepared (% yield given) by heating the corresponding compds. with II 8 hrs. on a H2O bath and distilling in vacuo: 1-(.beta.-chloroethoxy), 98, b0.08 135-45.degree., n20D 1.5490; 1-(.gamma.-chloro-.beta.-ethylpropoxy), 52, b1.0 215-25.degree., n20D 1.5340; 1-allyloxy, 94, b0.009 115-20.degree., n20D 1.5431; 1-phenoxy, 70, b0.009 170-80.degree.; 1-(p-chlorophenoxy), 25, b0.01 180-90.degree.. The following derivs. of I were prepared by heating II and the corresponding mercaptans in a sealed glass tube for 8 hrs. at 100.degree.: 1-ethylthio, 87%, b0.02 110-20.degree., n20D 1.5668 and 1-phenylthio, 70%.

IT **Bactericides**, Disinfectants and Antiseptics
Fungicides or Fungistats
(4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-4,7-methanoisobenzofuran derivs.)

IT Insecticides
(4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-4,7-methanoisobenzofurans)

IT 4,7-Methanoisobenzofuran-1-ol, 4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-, acetate

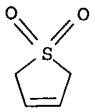
IT 3369-52-6, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-
(and derivs.)

IT **77-79-2**, Thiophene, 2,5-dihydro-, 1,1-dioxide 1192-16-1, Thiophene, 2,3-dihydro-, 1,1-dioxide
(organic P derivs. of)

IT 1021-17-6, 4,7-Methanoisobenzofuran, 1-bromo-4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro- 1024-25-5, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-1-methoxy- 1028-05-3, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1-ethoxy-1,3,3a,4,7,7a-hexahydro- 13803-25-3, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1-(2-chloroethoxy)-1,3,3a,4,7,7a-hexahydro- 13803-26-4, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-1-propoxy- 13803-27-5, 4,7-Methanoisobenzofuran, 1-(allyloxy)-4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro- 13803-28-6, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1-(3-chloro-1-ethylpropoxy)-1,3,3a,4,7,7a-hexahydro- 13803-29-7, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-1-phenoxy- 13803-30-0, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1-(ethylthio)-1,3,3a,4,7,7a-hexahydro- 13803-31-1, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro-1-(phenylthio)- 100381-23-5, 4,7-Methanoisobenzofuran, 1-butoxy-4,5,6,7,8,8-hexachloro-1,3,3a,4,7,7a-hexahydro- 100964-76-9, 4,7-Methanoisobenzofuran, 4,5,6,7,8,8-hexachloro-1-(p-chlorophenoxy)-1,3,3a,4,7,7a-hexahydro-
(preparation of)

IT **77-79-2**, Thiophene, 2,5-dihydro-, 1,1-dioxide
(organic P derivs. of)

RN 77-79-2 HCAPLUS
CN Thiophene, 2,5-dihydro-, 1,1-dioxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



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